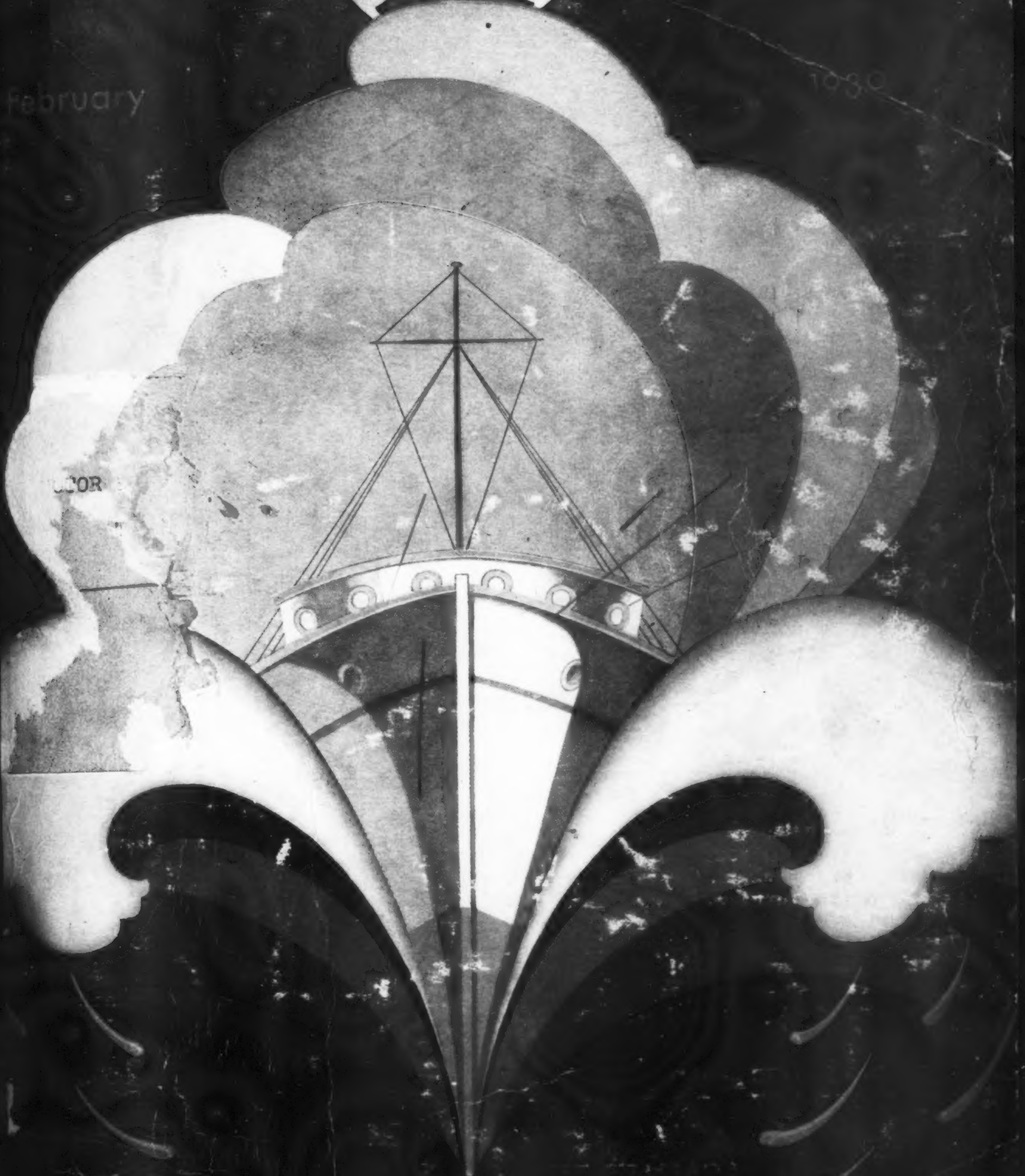
The Yachtsmen's Magazine

MOTOR BOATING

February 1930

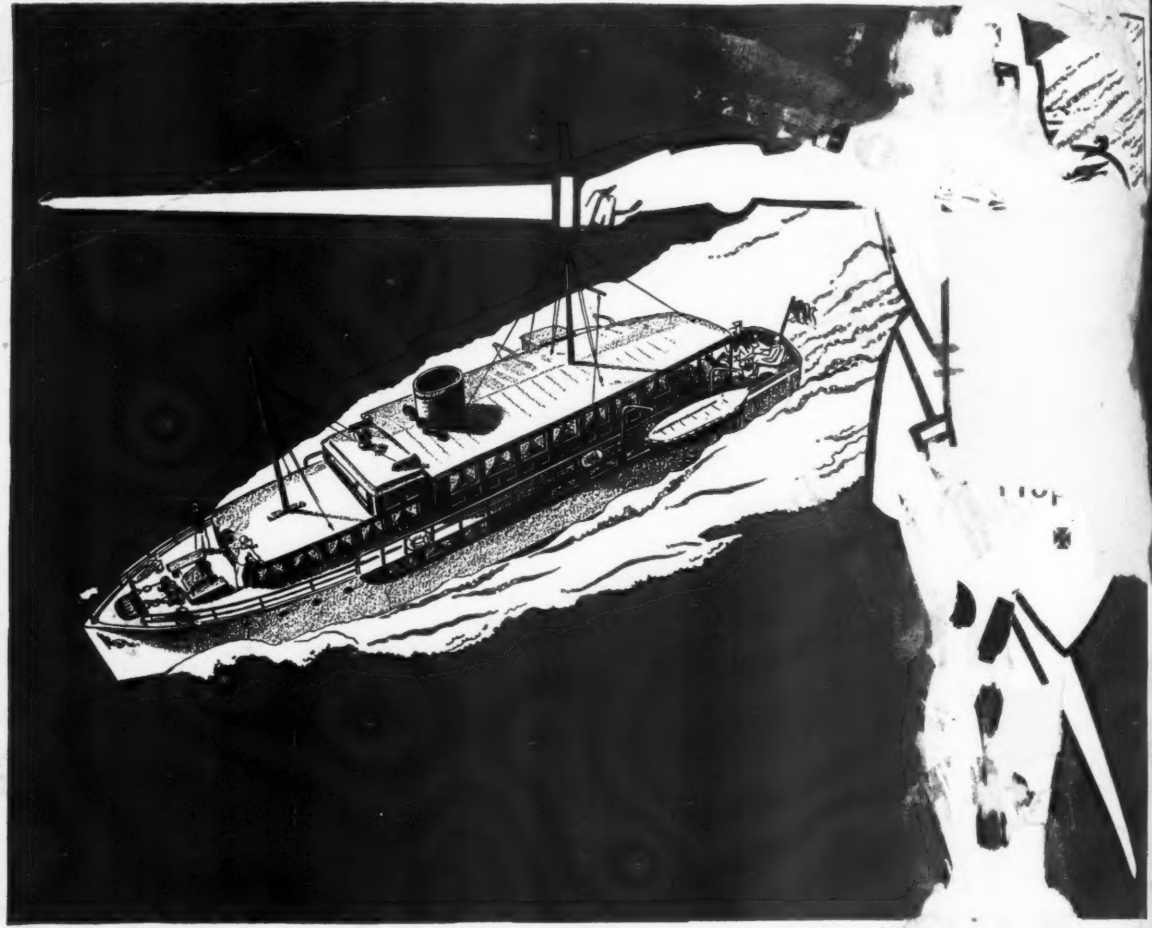


SILVER ANNIVERSARY

SHOW NUMBER

ONE DOLLAR
THE COPY

FIRE — AN INCIDENT OR A DIS



Adventurous as a Vi
Safe as a Governme n

Your boat—a staunch comrade in adventures that you can live instead of read about. Gay as the colors of your flag. Ready for an hour's relaxation or a week's cruise. What an escape valve from everyday care!

Your adventures are safe adventures when your boat is guarded against fire by ALFIT protection. For ALFITE means certain death to fire. ALFITE never loses!

Simple? ALFITE Gas is stored in small steel cylinders connected by fixed pi danger points. When h out a release lever, outsid

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LA FRANCE AND FOAMITE PROTECT

AN ENGINEERING SERVICE

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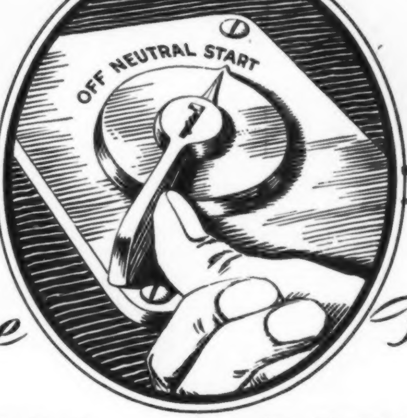


[illegible] for the First Time in

JO[illegible]NSON AQUAFLYERS

tw[illegible] group of Johnson Boats powered by

JO[illegible]NSON SEA-HORSES

which will introduce the first

OU[illegible]ARD MATCHED UNITS

with [illegible] improvements for 1930 in Motors & Boats

JOHNSON

Aquaflyers and Johnson Boats

Safe, speedy models of new PRESTITE, or of Waterproof SEALITE construction guaranteed to outlast comparable boats of ordinary construction.

JOHNSON innovations for 1930 presage an entirely new trend in water motoring. They are epoch-making.

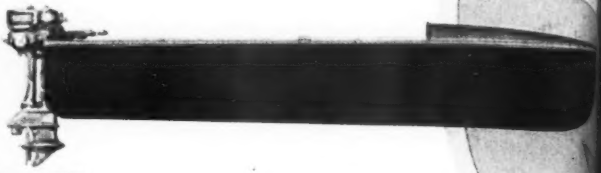
Among them comes the Johnson Aquaflyers—a new type of craft electrically started and lighted.

It is lightweight, spacious, clean, and luxurious, and drives with safety at average motor car speeds. The motor—a Johnson Sea-Horse—is concealed and silenced in a hatch-covered recess in the stern. This leaves the interior clean and as roomy as a 26-ft. inboard runabout. White flannels and summer frocks are never endangered by grease.

This Johnson Outboard Motor Boat will not only outperform inboard motor boats in deep water and rough water, but due to its automatically tilting propeller will also navigate shoals and shallow water inaccessible to them. It can even be beached without skids.

It maneuvers more quickly and certainly in rough water because of the power and instant response of its propeller steering. It is safer in any water because the propeller tilts on striking obstructions that would disable an inboard motor boat propeller.

It requires no gasoline pump or gravity feed because of its new Vacturi Carburetor that lifts the fuel by suction alone. This carburetor, found on the latest motor cars, gives more power and uses 20% to 30% less fuel by superior atomization.



14 ft. Utility A, $165
Sealite construction, cedar deck, only 175 lbs.; round bilge bottom, 52 in. beam, 3 cross seats, ideal for yacht tender, camping, children.

15 ft. Utility B, $275
Sealite construction, V bottom, 52 in. beam; 3 cross seats with lazybacks; weighs 227 lbs.; true speed up to 22 m.p.h. with Sea-Horse "16."

17½ ft. Service Runabout, $485
Sealite construction, V bottom, 5 ft. beam; 3 cross seats with lazybacks; weighs 395 lbs.; true speed up to 26 m.p.h. with Sea-Horse "32." Aquaflyer type recess for motor.

JOHNSON

1930 Sea-Horse Moto

SEA-HORSE «32»

World's fastest outboard motor, holding the official American record at 49.34 m.p.h. Four cylinders with Release Charger, Water-cooled Underwater Exhaust, Rotary Valve, Pressure-vacuum Cooling System and Detachable Aluminum Cylinder Heads, make the Sea-Horse "32" unquestionably monarch of all outboard motors.

JOHNSON now revolutionizes the performance of twin-cylinder motors by introducing the first successful alternate-firing design in Sea-Horses "4" and "12." Two impulses per revolution instead of one, as heretofore, produce a smoothness of power flow and minimum vibration unequalled by any other two-cylinder motor. With twice as many sparks as usual to one pull of the starting rope, starting is as sure and certain as in automobiles.

Johnson's exclusive Release Charger brings equal ease and certainty of starting to other Sea-Horses.

The Underwater Exhaust, which deposits fumes below water and muffles the motor to a quiet hum, is perfected in Sea-Horses by being Water-cooled, and equipped with completely Automatic Back-pressure Release.

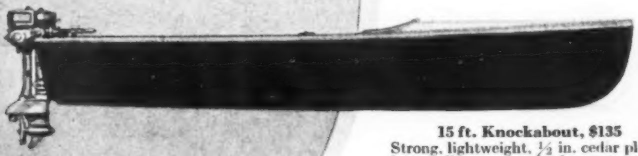
Sea-Horse "Single" $125.00 — Sea-Horse "3" $150.00 — Sea-Horse "4" $160.00
Sea-Horse "10" $185.00

JOHNSON

Matched to Sea-Horse Motors

20 ft. Aquaflyer Family Runabout
Prestite ½ in. Philippine mahogany (Bataan) construction, round bilge bottom, bent ribs; 63 in. beam, 33 in. depth, weighs 875 lbs.; 2 upholstered cross seats; spacious floor for chairs; up to 22 m.p.h. with Sea-Horse "32;" complete with motor, $1065.

17½ ft. Aquaflyer, De Luxe Runabout
Sealite construction, V bottom, 5 ft. beam; double cockpit arrangement, with two upholstered cross seats; with lazy-backs; weighs 450 lbs.; true speed up to 19 m.p.h. with Sea-Horse "16", complete with motor, $925—up to 25 m.p.h. with Sea-Horse "32," complete with motor, $995.



15 ft. Knockabout, $135
Strong, lightweight, ½ in. cedar planking, hollow and round construction; strong, bent white oak ribs sheer to sheer, round bilge bottom, 4½ ft. beam.

Motor car starting ease by ELECTRIC STARTER on two Aquaflyers, and by either the Johnson Release Charger, or Alternate Firing principle.

The Sea-Horse Motor itself is so much lighter than inboard motors, it can easily be removed for service or storage by unscrewing two wing nuts.

Johnson Aquaflyers combine all advantages of an outboard motor boat, including economy, with the speed, luxury, and ease of starting of an automobile.

All controls, including the electric starter and speed control, and automobile steering wheel, are operated from the driving seat, as convenient and comfortable as your motor car.

These outboard motor boats will populate the waters as no other craft before them. A woman or child can start and drive them as easily as a man.

SEALITE and PRESTITE Construction New to Boat Building

Seamless, waterproof Sealite requires no care, no calking, and never leaks. But half the weight of ordinary construction in service, it is faster with the same power, more portable, and yet 35% greater in tensile strength as certified by Prof. W. M. Sawdon of Cornell University after comparative tests.

Prestite represents an amazing advance over all wood seam construction, being water-tight and remaining so without calking.

Johnson exhibits at the New York Motor Boat Show, Grand Central Palace, January 17th to 25th inclusive, space 409, 4th floor, and also entire lobby of the Astor Hotel, 45th and Broadway.

BOATS

Again Set New Standards

The fastest time ever made by any outboard motor—49.34 m.p.h.—was made with a Sea-Horse "32." The official American record for Class B is also held by Johnson with a Sea-Horse "16" at 43.97 m.p.h. In all, twenty-six out of forty official records are held by Johnson Sea-Horses—two-thirds of the total!

Among this line of champions there is a motor for every need, including the world's most portable motor, the Sea-Horse "Single," weighing only 27 pounds.

All dealers carry first aid parts. Stations for complete service in all sections of the country. *Prices f.o.b. factory.*

Write for Color-Illustrated Boat and Motor Catalog

JOHNSON MOTOR COMPANY
3000 Pershing Rd. WAUKEGAN, ILL.
In Canada: Canadian Johnson Motor Co., Ltd., Peterboro, Ontario
Distributors for British Columbia: Hoffar's, Ltd., Vancouver, B. C.

SEA-HORSE «4»

One of the two new-type alternate-firing twin-cylinder motors. The "4" sets a new standard of luxuriously smooth power flow for small and medium boats for fishing, hunting, and general utility. Has Pressure-vacuum Cooling System, Water-cooled Underwater Exhaust, Rotary Valve and Full Pivot Steering.

Sea-Horse "12" $195.00 — Sea-Horse "16" $250.00 — Sea-Horse "24" $285.00
Sea-Horse "32" $325.00

SEA=HORSES

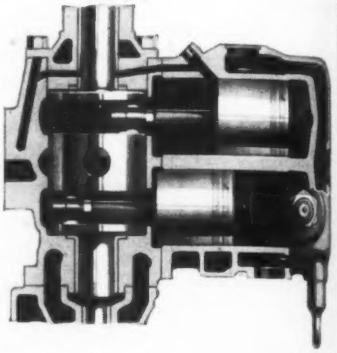
These 7 Great Johnson Features

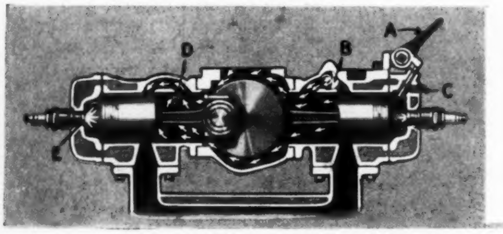
no other outboard motors enjoy . . . .

1 *Alternate Firing— Farthest Advance in Smooth Performance*

For the first time in history, twin-cylinder outboard motors are made successfully in which the cylinders fire alternately, instead of simultaneously. In Sea-Horses "4" and "12" two impulses are produced per revolution instead of one as heretofore. This change simply revolutionizes the performance of twin-cylinder outboards. The improvement is as noticeable as the difference between an eight cylinder automobile and a four.

Smoothness of power flow is increased 100% and vibration is cut to almost nothing. In trolling for fish or approaching piers or landing places, these motors throttle down to a noiseless, steady crawl unbroken by any noticeable pulsations even on the steering handle. Alternate firing produces twice the number of sparks to one pull of the starting rope and hence starting is the easiest ever known and rivalled only by the Release Charger in other Sea-Horses.





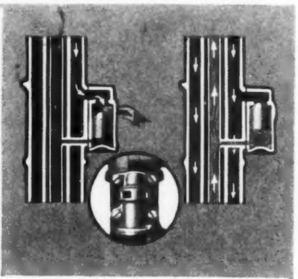
2 *Ease and Certainty of Automobile Starting*

Positive starting is achieved in Sea-Horses "32," "24," "16," "10" and "3" with the Release Charger. This releases compression from one cylinder, cutting in half the effort required to turn the motor.

The other cylinder is supercharged with the "gas" ordinarily delivered to both. At the same time spark intensity in this cylinder is increased. The doubled charge and enormous spark start the motor easily.

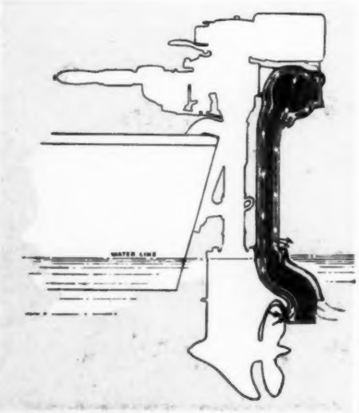
3 *Automatic Back-pressure Relief*

In Sea-Horses "4," "12," "16," "24" and "32" a valve on the side of the drive-shaft casing, which closes at high speeds and opens at low speeds, permits free exhaust of gases above the water line when starting and running slowly.



4 *Full Pivot Steering Backs Boat Without Stopping Motor*

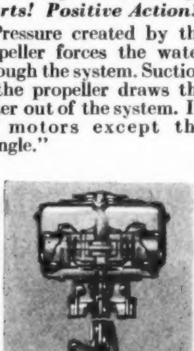
Johnson provides in Full Pivot Steering the only system in the world which allows complete maneuverability. Full Pivot Steering means that you can turn the motor completely around. It steers or starts in any and every direction. It reverses instantly and thus backs the boat without stopping the motor. You can get away from a crowded pier with ease, or worm in and out of tight places at will. You can swing the boat on its centre and turn it in its own length. This complete maneuverability of the boat provides an equaled factor of safety in avoiding obstacles and other craft. Full Pivot Steering is available in Sea-Horses "Single," "3," "4," and "12."



5 *Patented Pressure-Vacuum Cooling System*

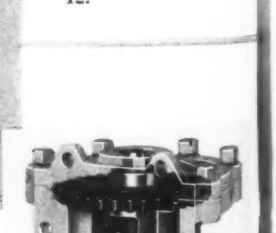
No Pump! No Moving Parts! Positive Action!

Pressure created by the propeller forces the water through the system. Suction of the propeller draws the water out of the system. In all motors except the "Single."



6 *The Only Water-cooled Underwater Exhaust*

Only Johnson Motors have an underwater exhaust with water-cooling system. This protects driver's hands and aids in cooling the gasses. The motor is muffled to a quiet hum. Available in Sea-Horses "4," "12," "16," "24" and "32."

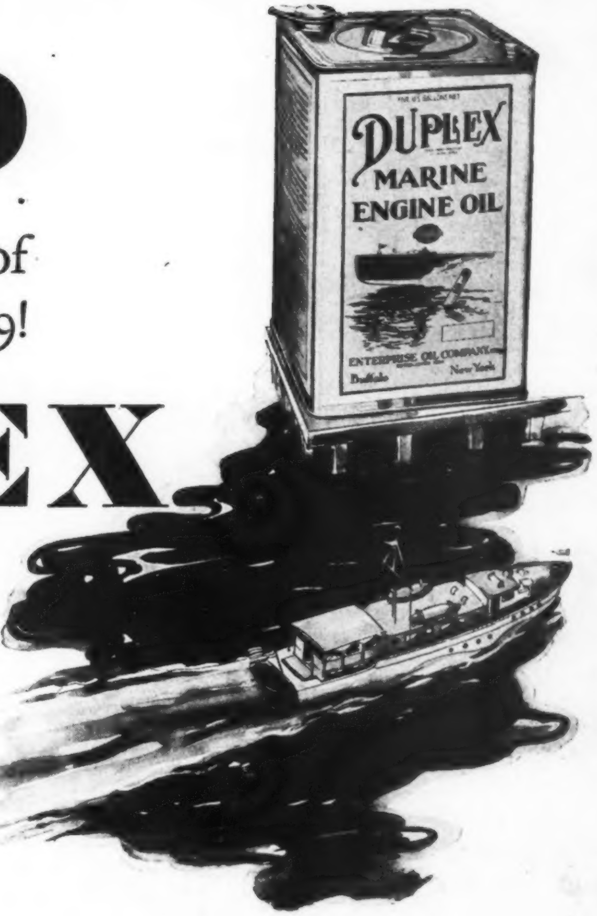


7 *Rotary Valve Insures Full and Even Charges At All Speeds*

In Sea-Horses "32," "24," "16," "12," and "4" the rotary valve revolves in perfect unison with the crankshaft. Full, complete, and perfectly even charges are assured, even at high engine speeds.

1930

repeats the history of
1926, '27, '28 and '29!



DUPLEX

MARINE ENGINE OIL

again is specified by these internationally famous builders of the world's finest standardized boats: Banfield, Chris-Craft, Chase-Emerson, Corsair, Dodge, Dee-Wite, Ditchburn, Fairform Flyer, Fleetwing, Gar Wood, Hacker, Hadley, Liggett, Mathews, Richardson, Robinson Sea-Gull and Sea-Lyon.

These *builders of Marine Engines* either directly specify Duplex Marine Engine Oil by instruction plates or otherwise directly recommend its use in preference to all others:

Duplex Marine Engine Oil is admittedly the preference of

85%

of America's boat and marine engine builders.

Chris-Craft, Caille, Gar Wood, Kermath, Niagara, Scripps, Sterling, Universal and Vimalert.

Made by
ENTERPRISE OIL COMPANY, Inc.
Established 1884
BUFFALO, New York
Makers also of Duplex *Motor* Oil . . . Serving Pierce-Arrow for 30 years . . . and Kasson Waterproof grease.

WHOLESALE DISTRICT DISTRIBUTORS IN
Baltimore Boston Chicago Cleveland Detroit Houston Miami New Orleans New York Palm Beach Philadelphia St. Louis
Pacific Coast Distributors:* Portland, *Beebe & Co.;* San Francisco, *John F. Blain;* Seattle, *Sunde & d'Evers Co.;
Vancouver, *Hoffars, Ltd.;* Wilmington (Calif.), *Ets—Hokin & Galvan*
DEALERS WHEREVER BOATS FLOAT

Thank You for the Greatest Year in our History

"I'm too old to use anything but the BEST!"

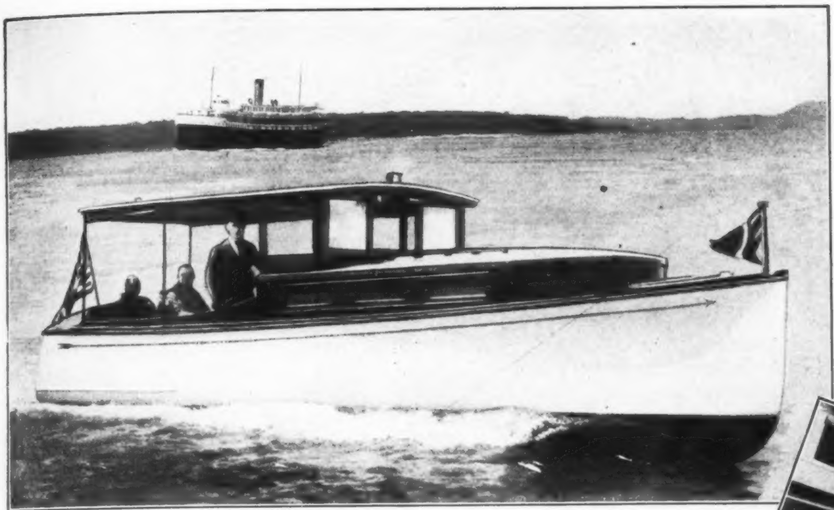
. . . . . and we're too Old to MAKE anything but the BEST

OUR 103-year-old policy of making only the finest marine paint specialties has made 1929 the greatest year in our history. For your satisfaction and for our continued growth, the identical standards which have produced this success will always apply to every product bearing the Edward Smith name.

See the Smith Exhibit at The Show—
same booth as always on the Mezzanine

EDWARD SMITH & COMPANY
LONG ISLAND CITY, N. Y.
Makers of Marine Paints and Varnishes since 1827

SMITH
AQUATITE
SPAR
1 GALLON
EST 1827
EDWARD SMITH & COMPANY



All Who Have Seen Them Say - - -

"THE GREATEST 29 FOOTERS EVER BUILT!"

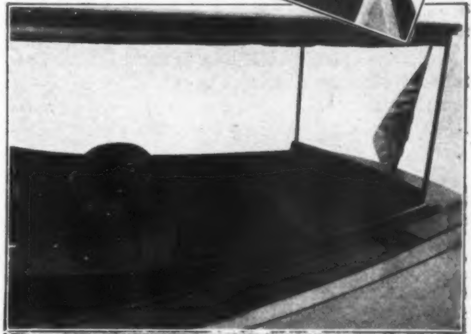
Each day hundreds of yachtsmen visit the Richardson factory and the Dealers' display rooms to inspect the Cruisabouts and each day these hundreds of experienced yachtsmen say that the Cruisabouts are absolutely the finest 29 foot cruisers they have ever been on board.

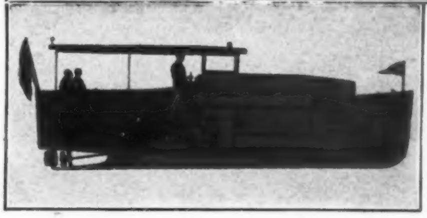
Yachtsmen not only like the beautiful, yachty appearance and seaworthiness of the Cruisabouts, but are impressed with the clear, select lumber, the extra heavy brass and bronze fittings and the nationally known equipment (the best that can be obtained) used in the construction of these quality built boats.

The Single Cabin Richardson 1930 Cruisabout priced at $3,585.00 is a most pleasant surprise in quality, workmanship and accommodations. The cockpit is 10 feet long and nearly 8 feet wide. At the stern of this cockpit is a cushioned seat large enough for five or six people. There is floor space for more than a dozen when day cruising or, when living aboard, for the placing of a number of easy chairs so that you and your guests can enjoy your leisure without the least bit of crowding.

In the cabin are the galley, toilet room, linen, clothes, food and dish lockers and two large, soft, upholstered spring seats that open into four berths. Six large screened windows and a screened companionway provide for ventilation.

Step over to the Richardson exhibit, inspect these jaunty boats and you will agree with thousands of experienced yachtsmen that the Cruisabouts are the greatest 29 footers ever built. Free booklet "E-30" mailed on request.





RICHARDSON BOAT COMPANY, INC.
350 Sweeney Street, North Tonawanda, N. Y.

CRUISABOUTS ARE DISPLAYED BY

Bruns-Kimball & Co., 5th Ave. & 15th St., New York City, or 102 So. Fourth St., Philadelphia, Pa., Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass., F. D. Homan, 78 Riverside Ave., Amityville, L. I., N. Y., N. J. Shea, 1424 Lauderdale Ave., Lakewood, Ohio, Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit, Mich., A. M. Deering, 1454 Builders Bldg., Chicago, Ill., Volney E. Lacey, Charlotte Station, Rochester, N. Y., George Bender, Erie Yacht Club, Erie, Pa., Henry Pohl, Inc., On the Causeway, Miami, Fla., Electric Supply Co., 210 21st St., Galveston, Texas, T. B. F. Benson, 371 Bay St., Toronto, Ont., Canada, C. O. Horstman, 813 So. Washington St., Peoria, Ill.

Richardson 1930 Cruisabouts

TO THE SUCCESSFUL DISTRIBUTOR

Now that you are going to sell airplanes

FOR some time, the successful distributor of motor boats and yachts has known that, sooner or later, his organization would be selling airplanes. He has been waiting, wisely, for assurances that his success will not be handicapped for lack of the following essential considerations:

First—A MARKET. For sales there must be prospects—a group of *actual prospects* for airplanes within the distributor's own territory; in fact, among his present clientele.

Second—SERVICE FACILITIES. The purchaser of an airplane is entitled to service. Convenient and adequate facilities for storage and maintenance of aircraft must be assured to every owner.

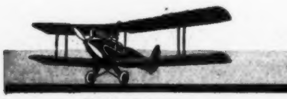
Third—TIME PAYMENTS. If volume sales are to be achieved, suitable credit arrangements should be made available to the purchaser of airplanes.

Fourth—RESPONSIBLE PRODUCTION. The success of the distributor depends largely upon the strength of the manufacturer. There must be tremendous resources in money, engineering research and plant equipment behind the product. The distributor does not want to run the risk of selling an orphan airplane. He realizes the importance of identifying his organization with the strongest manufacturer in the field.

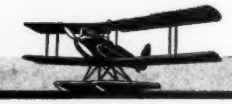
Today, the distributor sees the fulfillment of every condition essential to the ready sale of aircraft under highly favorable circumstances.

The market is established. On the aviation pages of his local newspaper, the boat dealer sees recorded the growing interest in aviation in his community—flights made by people of his own acquaintance, intense activity at the flying fields, growing schools, the formation of aviation clubs under splendid auspices, the use of the airplane in business, the busy schedules of air transportation lines. The familiar question no longer is, "Have you been up?" but "When are you going to get a plane?"

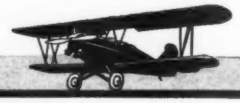
Service facilities are available. Curtiss-Wright Service Organizations dot the country and if not on the spot, are within easy flying distance of almost any city. Whether a routine inspection or a complete engine overhaul, Curtiss-Wright experts are at hand to do the job efficiently and at reasonable rates. A complete stock of spare parts is carried at convenient depots.



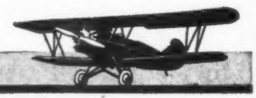
DH Moth



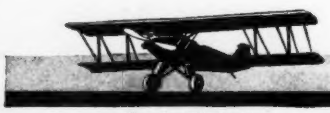
Moth on floats



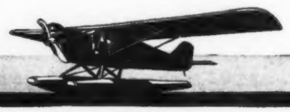
Travel Air Trainer



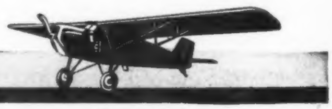
Travel Air Speedwing



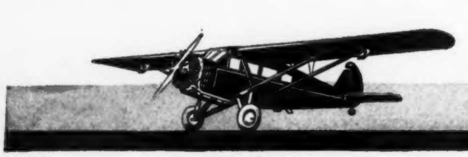
Curtiss Fledgeling



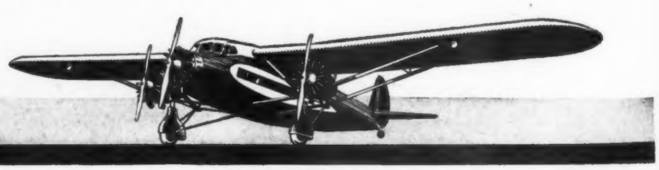
Curtiss Robin on floats



Curtiss Robin



6 pl. Travel Air



Keystone Patrician

TRAVEL AIR COMPANY
MOTH AIRCRAFT CORPORATION
KEYSTONE AIRCRAFT CORPORATION
LOENING AERONAUTICAL ENG'G CORP.
CURTISS-ROBERTSON AIRPLANE MFG. CO.
CURTISS AEROPLANE & MOTOR COMPANY

Time payments are here. The Aviation Credit Corporation affords facilities for time payments to purchasers of Curtiss-Wright airplanes on terms similar to the familiar arrangements which have long proven satisfactory in the automotive field.

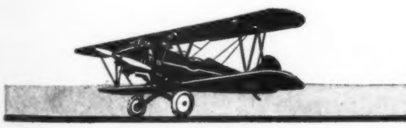
Integrity of the manufacturer, most vitally important to the dealer, is assured to all distributors of Curtiss-Wright planes. The manufacturers within the Curtiss-Wright Organization comprise the dominant group in the aeronautical field. A large percentage of all airplanes now in service were manufactured by companies now identified with Curtiss-Wright interests. Such manufacturing leadership hardly has a parallel in other great industries, even in the automotive industry.

There is a Curtiss-Wright plane for every prospect. These range from the tiny two-place open cockpit plane to giant multi-motored transport planes, including the most noted types for every service, land, sea and amphibian. Curtiss-Wright aircraft and engines are made in six great plants in the east and west, employing many thousands of men and having a combined total of nearly one million square feet of floor space. All of these manufacturing companies have been long established and are under the direction of capable engineers. Correct design and construction and proven performance are well-known characteristics of every Curtiss-Wright product. Production schedules are maintained. Deliveries are on time.

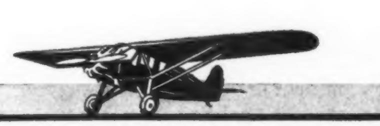
With the only complete line of planes available for every purpose and for every prospect, and with the backing of national advertising reaching tens of millions of people, the Curtiss-Wright distributor should be—will be—the leading aircraft distributor in his locality. His capability for the job will be proven by his record of the past in selling other means of transportation. Such distributors, who are now going to sell airplanes, are invited to write for full details of the attractive Curtiss-Wright sales plan and the valuable franchise it offers to responsible sales organizations.

Those who attend the New York Motor Boat Show are invited to visit our showrooms and discuss the plan in person.

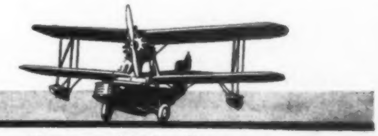
CURTISS-WRIGHT SALES CORPORATION
Sales Division of CURTISS-WRIGHT CORPORATION
Dept. 53, 27 West 57th Street, New York



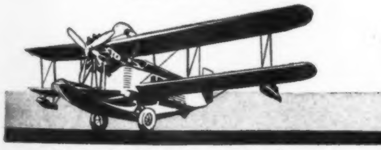
Travel Air Sport



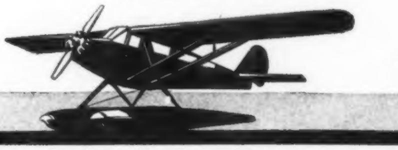
4 pl. Travel Air



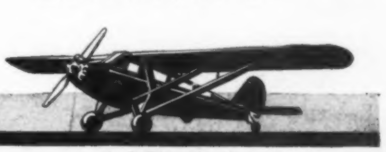
Keystone-Loening Commuter



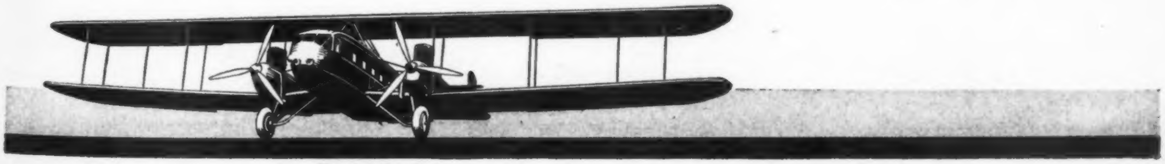
Keystone-Loening Air Yacht



6 pl. Travel Air on floats



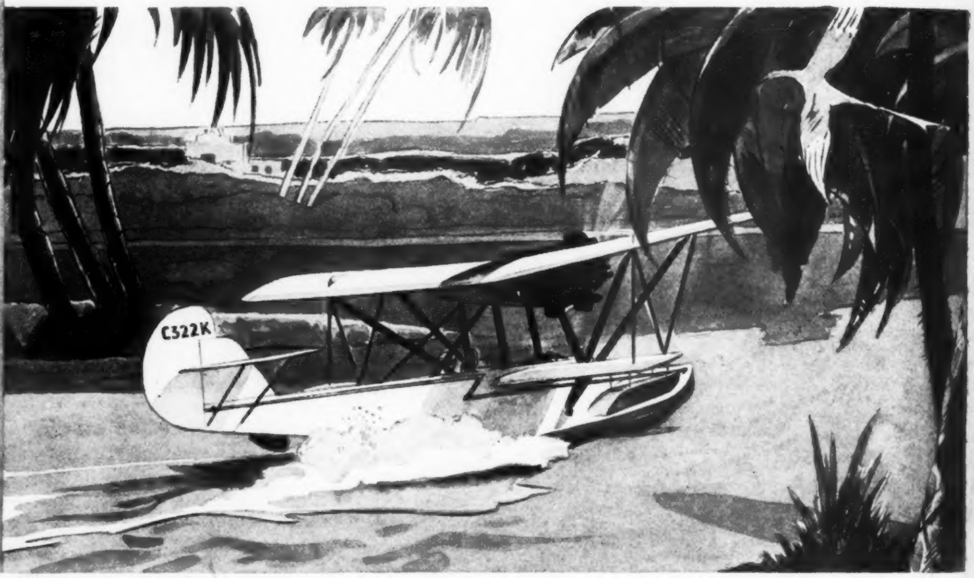
6 pl. Travel Air



Curtiss Condor

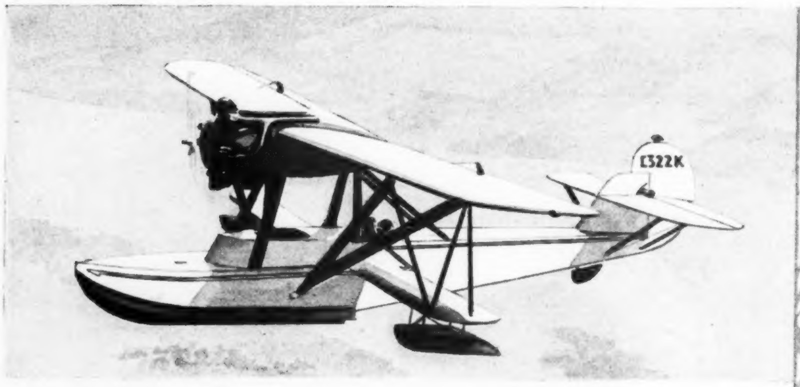
CURTISS-WRIGHT SALES CORPORATION

• • a speed boat on the water a sport plane in the air • •



A new sport awaits you! The joy of speedboating—and the thrill of flying—combined! ¶ The Eastman Flying Yacht—a trim, snug craft for coursing the waters or sailing the skies—offers yachtsmen a pleasurable, new diversion—and at a price well within the means of all sportsmen. ¶ With accommodations for three or four, according to fuel loading, the Eastman is a light, fast ship, easily maneuverable and easy to take off and land—so simple to handle that flying it can be mastered in a few hours of instruction. Fully loaded, it leaves the water in 8 or 12 seconds and climbs 900 to 1000 feet per minute. Landing is simplicity itself—as only one point of contact is necessary. ¶ Write for complete information about the smart, trig Eastman, with its speed of 110 miles per hour, cruising radius of more than 300 miles—and attractive price of $9595. Dealers interested in adding the Eastman to speed boat lines are invited to write for full particulars.

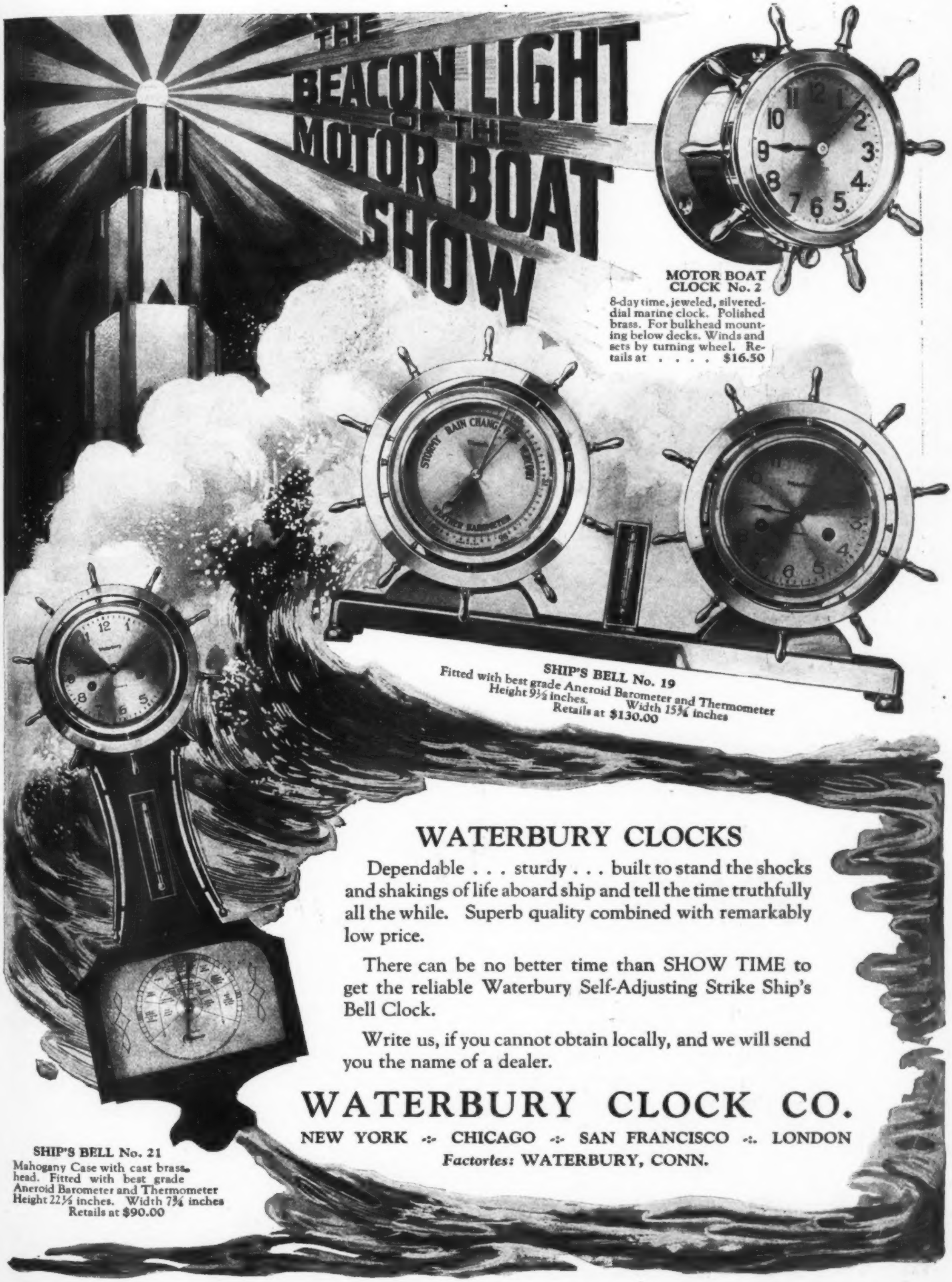
THE EASTMAN FLYING YACHT



DETROIT AIRCRAFT

UNION TRUST BUILDING, DETROIT

LOCKHEED AIRCRAFT CORPORATION
RYAN AIRCRAFT CORPORATION
PARKS AIR COLLEGE, INCORPORATED
PARKS AIRCRAFT CORPORATION
EASTMAN AIRCRAFT CORPORATION
BLACKBURN AIRCRAFT CORPORATION
MARINE AIRCRAFT CORPORATION
GROSSE ILE AIRPORT, INCORPORATED
GLIDERS, INCORPORATED
AIRCRAFT PARTS COMPANY, INCORPORATED
AIRCRAFT DEVELOPMENT CORPORATION



MOTOR BOAT CLOCK No. 2
8-day time, jeweled, silvered-dial marine clock. Polished brass. For bulkhead mounting below decks. Winds and sets by turning wheel. Retails at $16.50

SHIP'S BELL No. 19
Fitted with best grade Aneroid Barometer and Thermometer
Height 9½ inches. Width 15¾ inches
Retails at $130.00

SHIP'S BELL No. 21
Mahogany Case with cast brass head. Fitted with best grade Aneroid Barometer and Thermometer
Height 22½ inches. Width 7¾ inches
Retails at $90.00

WATERBURY CLOCKS

Dependable . . . sturdy . . . built to stand the shocks and shakings of life aboard ship and tell the time truthfully all the while. Superb quality combined with remarkably low price.

There can be no better time than SHOW TIME to get the reliable Waterbury Self-Adjusting Strike Ship's Bell Clock.

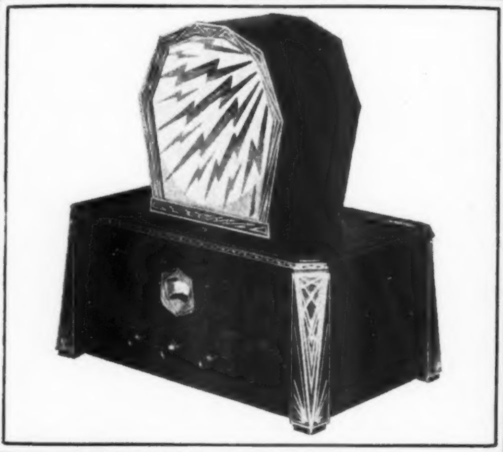
Write us, if you cannot obtain locally, and we will send you the name of a dealer.

WATERBURY CLOCK CO.

NEW YORK ∴ CHICAGO ∴ SAN FRANCISCO ∴ LONDON
Factories: WATERBURY, CONN.

You're never far away

with a CROSLEY aboard!



$49 without accessories

Crosley 21. Metal case. Utilizes six tubes, including THREE 222 Screen Grid Battery tubes. With legs, $54. Receiver: 7¾" high, 17¾" wide, 11¾" deep. Speaker: 10½" high, 9½" wide, 6½" deep.

Crosley Dynacone Speaker $18 extra

WHEREVER your travels take you, you're never far away from the news and entertainment of the world—if there's a Crosley aboard. Installed on hundreds of yachts and cruisers, Crosley Radio has been put to every test and pronounced—"seaworthy."

Crosley Screen Grid Battery sets (operating with the famous Dynacone speaker) will bring to your craft the same unfailing performance that Crosley A. C. models provide for thousands of homes on land. A rich, clear tone . . . remarkable selectivity and volume . . . a faithful reproduction of the things you want to hear. And yet these perfected battery receivers require a minimum of current —the drain on batteries is *25 per cent less* than with ordinary sets!

Ingeniously designed to fit into small space, and attractively finished, one of these efficient Crosley sets is a worthy addition to any craft afloat! And they're priced in accordance with the famous Crosley policy: "The finest in radio at the lowest price."

An authorized Crosley dealer will tell you more about them. Or if you wish, write direct to us.

THE CROSLEY RADIO
CORPORATION
Powel Crosley, Jr., Pres.
CINCINNATI, OHIO
Home of WLW
—"the Nation's Station"

$88.50 without tubes or batteries

Crosley 22. The same Screen Grid storage battery unit as in Crosley 21 is incorporated in a beautiful console cabinet of two-tone walnut veneer, complete with the Crosley Dynacone power speaker. Dimensions: 40" high, 24" wide, 14¾" deep.

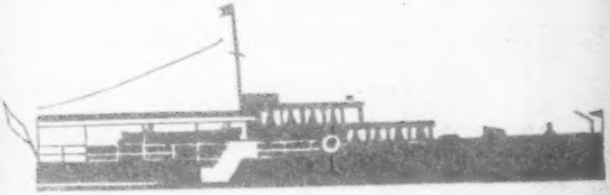
Western prices slightly higher

In addition to the Battery Sets shown here, The Crosley Radio Corporation makes a complete line of 110-volt A.C. Screen Grid and 110-volt D.C. Screen Grid radio receivers for use on cruisers where such current is available.

You're there with a

CROSLEY

a.c.f.
cruisers



THE A.C.F. 30′
DOUBLE CABIN CRUISER

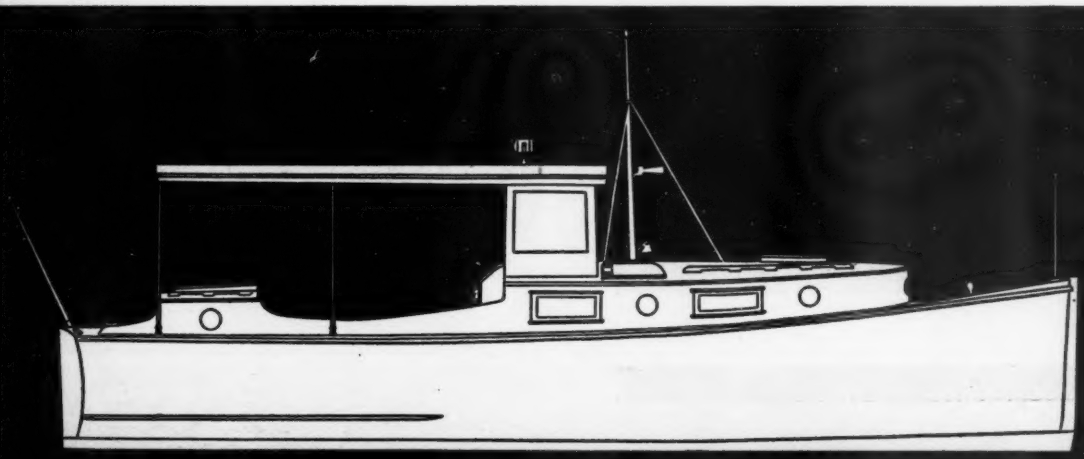
Here is a small boat which doesn't confine you to a single cabin. Beside your own cabin, fitted to accommodate four for sleeping, the after cabin of the A.C.F. "30" permits you to entertain guests aboard, with privacy for them and for your own family. Both cabins are fitted for solid living comfort. Both have extremely comfortable beds. Both have large dressers and mirrors.

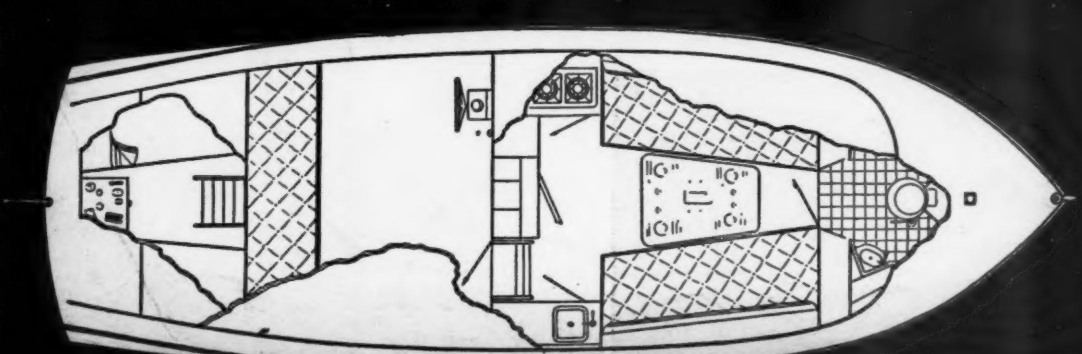
Value . . . the utmost for your investment . . . is the very keynote of the "30". There's real roominess in both cabins and cockpit. There's a galley that is fitted for real cooking. There's a toilet room in spotless white, with thoroughly efficient fixtures. And there's a 72 horsepower engine that gives you a good twelve miles, hour after hour.

And, as in the case of every A.C.F. cruiser, there's everything in the world aboard when you first set out . . . even to china, tableware and blankets!

SPECIFICATIONS:

Length, 30′ 0″ • Beam, 9′ 6″ • Draft, 2′ 4½″ • Gas capacity, 50 gallons • Water capacity, 30 gallons
Engine, 1—72 h. p. 6 cylinder • Speed, 12 m. p. h. • Sleeping accommodations for six





THE NEW A. C. F.

30′ CRUISER RUNABOUT

You've probably spent a lot of time wishing for a small boat with speed and outdoor space enough for water sports and yet, so equipped that you could easily use it as a cruiser when you wished to.

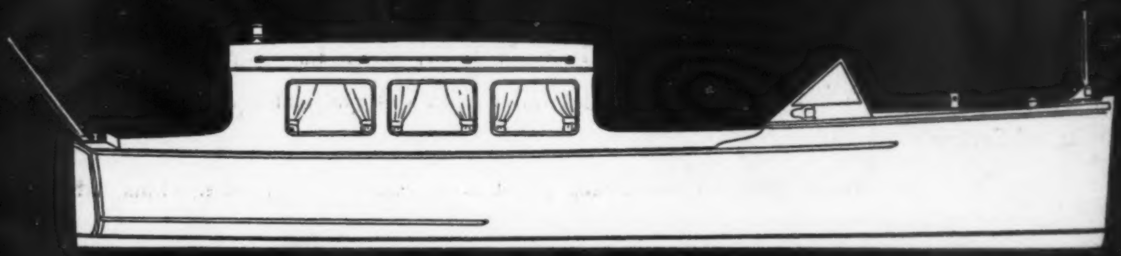
Here is that combination, ideally worked out for you in this new A. C. F. cruiser runabout. First of all, the "30" is a play boat, with two cockpits—fore and aft—that give you room and a lot of it for swimming or fishing or merely for lazying in the sun.

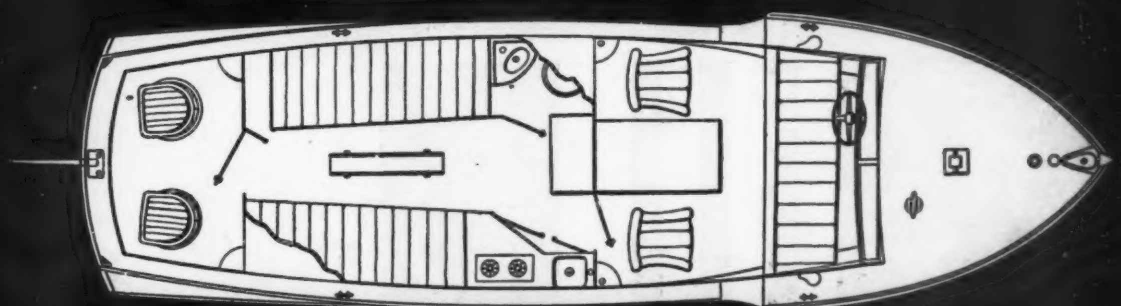
But you'll also find that there isn't a thing lacking which can add to your comfort when you do wish to go on a cruise. Her cabin is large and liveable—with comfortable berths, a well fitted toilet room, and a compact but complete galley.

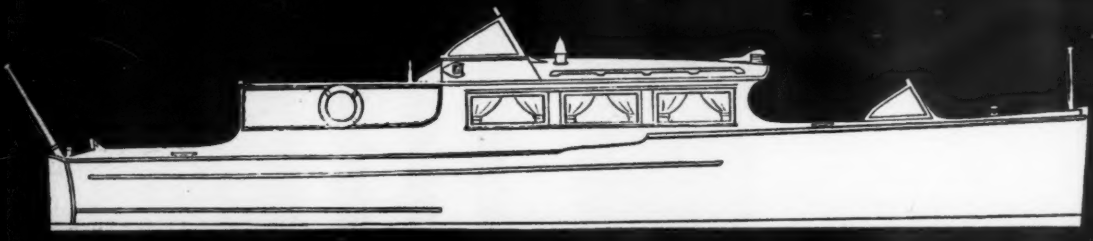
A new A. C. F. motor gives you 21 miles per hour . . . smoothly and steadily, hour after hour.

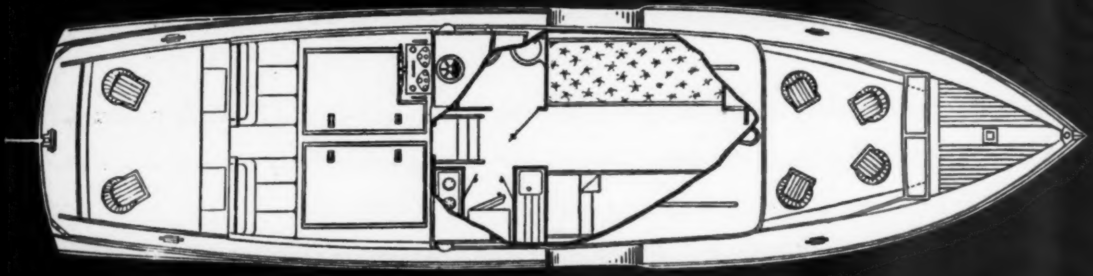
SPECIFICATIONS:

Length, 30′ 6″ • Beam, 8′ 8″ • Draft, 2′ 4″ • Gas capacity, 80 gallons • Water capacity, 45 gallons
Engine, 110 h. p. 8 cylinder • Speed, 21 m. p. h. • Sleeping accommodations for five









THE A.C.F. 38′ TWIN SCREW EXPRESS CRUISER

Here's a speedy commuter whose 8 cylinder A.C.F. motors drive her along at twenty-five miles an hour . . . twenty-five miles without a trace of vibration, because her engines are so perfectly synchronized. She has more than generous cockpit space — aft as well as forward — room for lounging comfortably and for water sports.

And yet, her cabin is equipped with every comfort you can demand for an extended cruise. She has comfortable full size berths and loads of locker space for your clothing. She has a compact galley which is completely fitted. Her toilet room is large, and equipped with thoroughly tested fixtures.

She's delivered to you with everything you'll need aboard . . . even to china, table ware, linen and blankets.

SPECIFICATIONS:

Length, 38′ 0″ • Beam, 9′ 0″ • Draft, 2′ 6″ • Gas capacity, 150 gallons • Water capacity, 45 gallons • Engine, 2—110 h. p. 8 cylinder • Speed, 25 m. p. h. • Sleeping accommodations for four.

THE NEW a.c.f
46′ CRUISER

In this newest cruiser of the a.c.f fleet, the entire resources of the organization have been bent to giving you the utmost in both comfort and luxury.

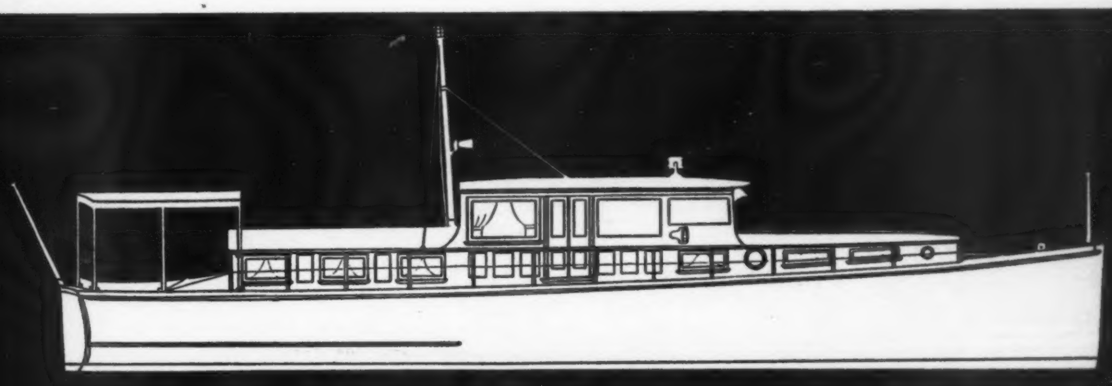
She is amazingly roomy, and has not a single cramped quarter in her whole makeup. She has two large staterooms, each with its own toilet room adjoining, assuring absolute privacy to both owner and his guests. Each room is completely furnished for comfortable living . . . each has full length clothes closets.

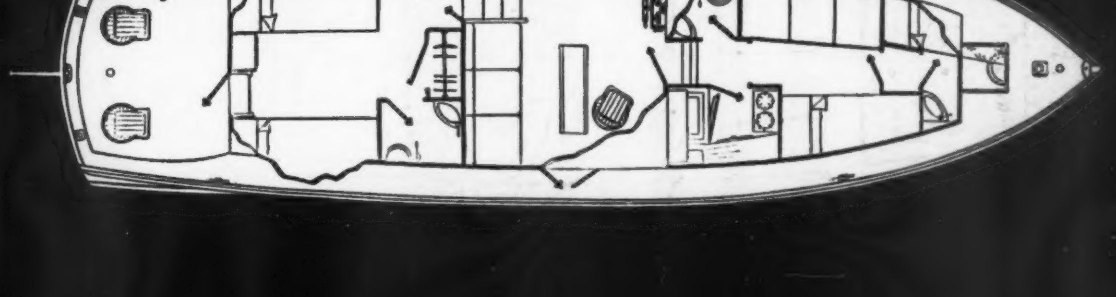
An unusual feature of the "46" is her combination dining-and-navigating saloon, which has been remarkably well worked out by her designers. She handles with unbelievable ease, with central controls completely in the hands of her navigator.

Two new a.c.f engines turn out 18 steady miles per hour and are so perfectly synchronized that vibration is almost totally absent.

SPECIFICATIONS:

Length, 46′ 0″ • *Beam, 11′ 6″* • *Draft, 3′ 3″* • *Gas capacity, 225 gallons* • *Water capacity, 100 gallons* • *Engine, 2—6 cylinder 90 h. p.* • *Speed, 18 m. p. h.* • *Sleeping accommodations for six.* •





THE A.C.F.
47′ CRUISER

The 47′ cruiser is pretty much a family boat, for she balances ever so nicely between the masculine and the feminine points of view.

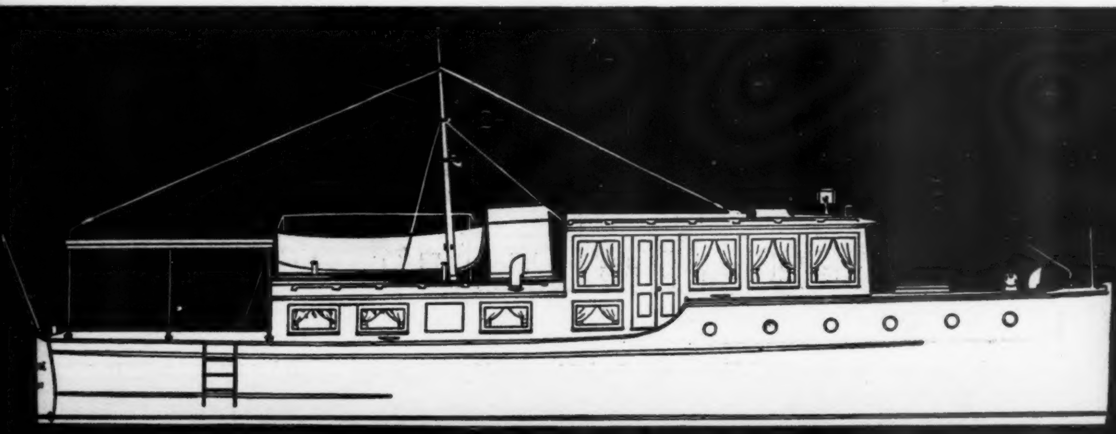
She has a rugged hull . . . you can take her through any sort of blow and be sure of coming out safely and soundly on top! She runs steadily and she handles, for all her solidity, at a finger touch. Her controls are so compactly arranged that she can be completely and safely manned by a single person. Her engine is so dependable that it requires nothing beyond a little occasional care.

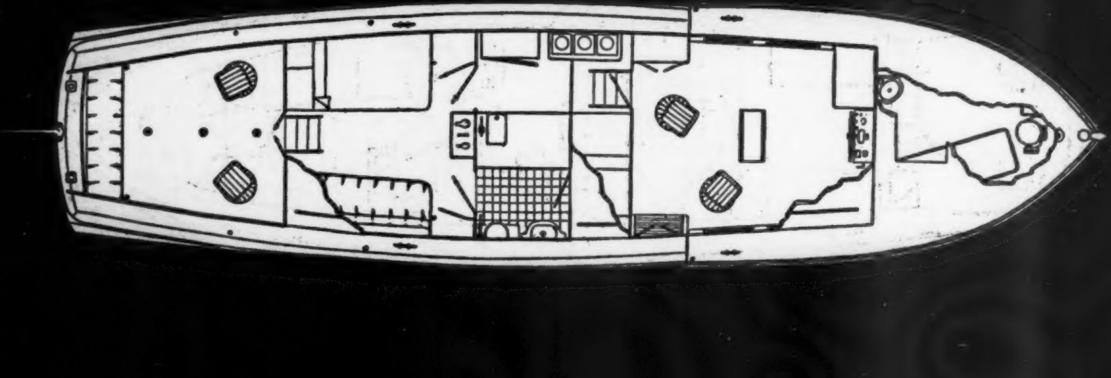
Her cockpit is extremely large—a lounge for daytime and evenings—a roomy place for sun and water sports. Inside, comfort and luxury combine in a masterly fashion for real living. Her cabins are roomy. Her galley is fitted to turn out a mighty dinner, with every utensil a cook can call for at hand. Her toilet room is gleaming white, exceptionally large and well ventilated.

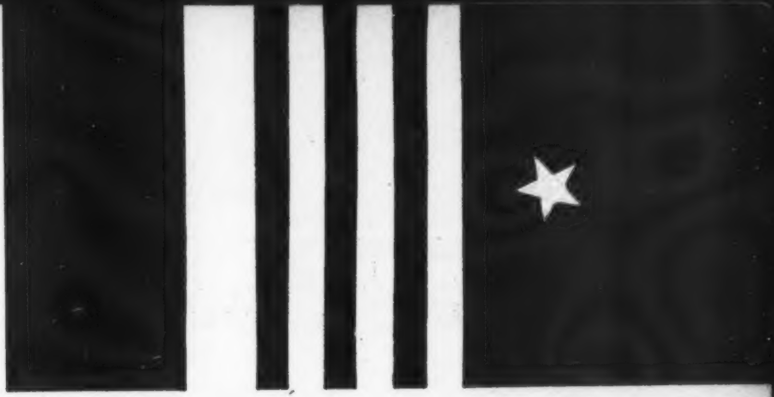
A special feature is the extra sleeping space that the convertability of the seats in the bridge deck offers.

SPECIFICATIONS:

Length, 47′ 0″ • *Beam, 11′ 8″* • *Draft, 3′ 10″* • *Gas capacity, 260 gallons*
Water capacity, 130 gallons • *Engine, 1—175 h. p. Hall Scott Motor* • *Speed 17 m. p. h.*







THE ACF
54′ CRUISER

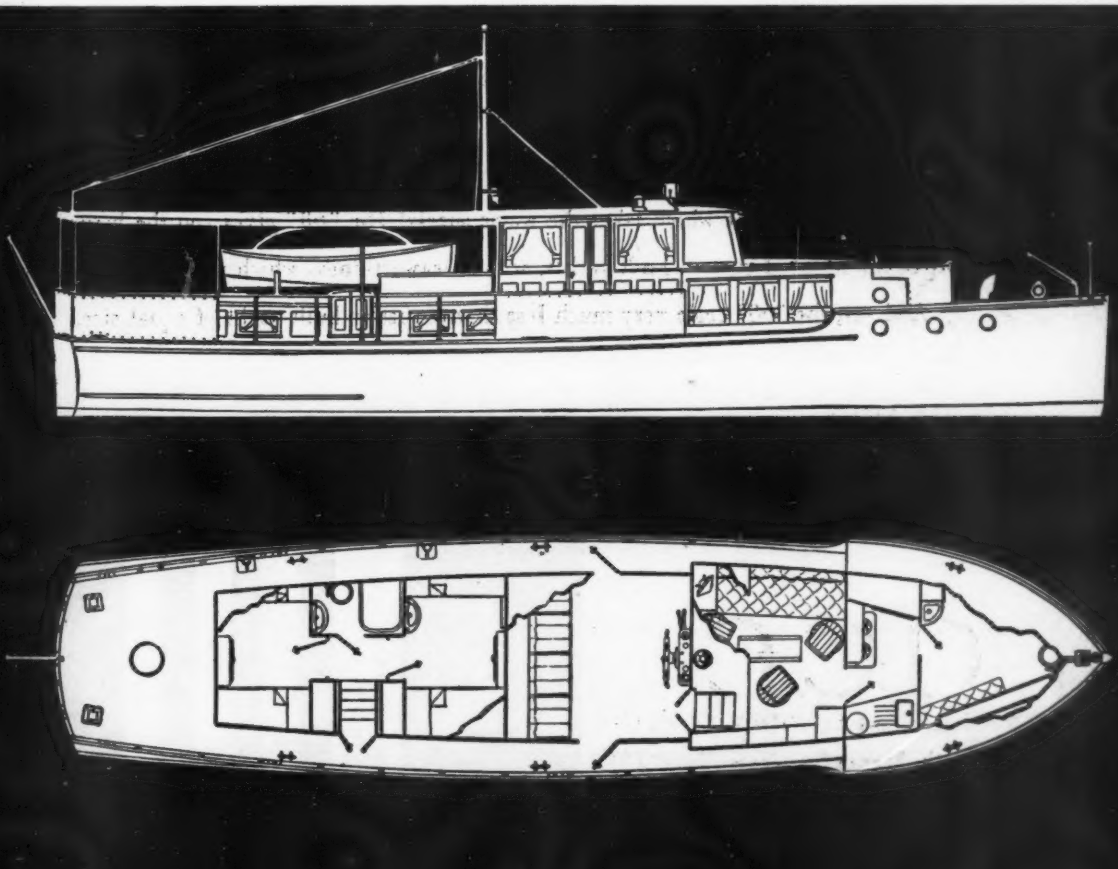
Here is a standardized boat fitted with every conceivable luxury . . . a standardized boat—built from tested tried plans—fitted in the manner you have come to associate with only the very finest of custom built yachts.

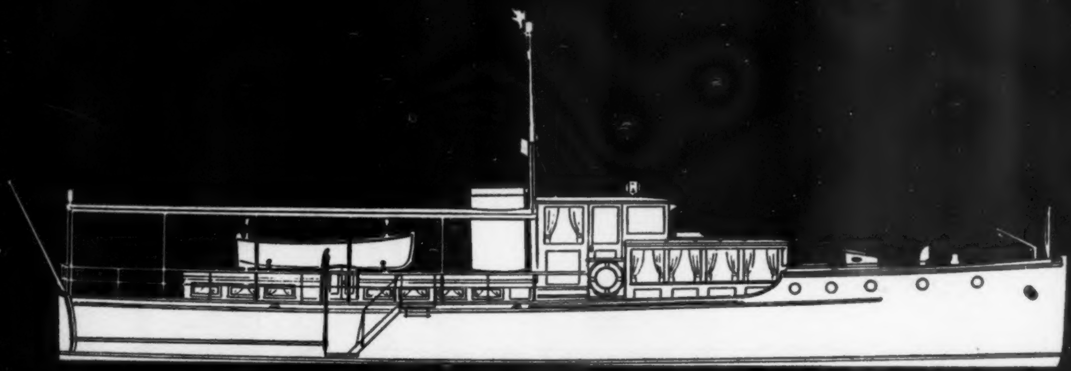
The "54" has the room you would expect of a boat of her size, both inside and on her decks. By careful planning and allotment of her interior divisions, she has been given an even greater spaciousness than her length suggests. Her staterooms—both for owner and guests—are unusually large, with comfortable real beds and full length clothes lockers. A large bath tub, in addition to shower, is a feature which gives you an idea of the manner in which your comfort aboard has been considered in the design. The galley is large . . . lighted and ventilated with 5 port holes . . . and equipped with a large three burner stove and an oven.

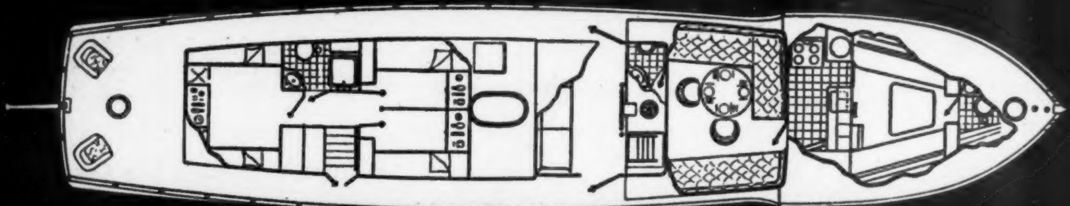
The "54" is fully found when you take her away. There isn't a thing except your clothing to add before you set out!

SPECIFICATIONS:

Length, 54′ 0″ • *Beam, 12′ 0″* • *Draft, 3′ 0″* • *Gas capacity, 450 gallons*
Water capacity, 220 gallons • *Engine, 2—175 h. p. 6 cylinder Hall Scott* • *Speed, 20 m. p. h.*







THE a.c.f. 68′ MOTOR YACHT

Your own stateroom full width of the boat, finished in rich walnut and ivory . . . two staterooms for your guests both of them beautifully done . . . tubs as well as showers . . . an exquisite dining saloon in mahogany and brocade . . . a galley to suit any cook . . . and comfortable quarters for a crew of four!—it sounds like a custom built job, doesn't it?

But it's really a standardized boat in the very finest sense of that term—a boat built from tried and tested plans, one which takes the water surely! The "68" gives you the luxury and the sheer comfort of the finest of custom built yachts, with a seaworthiness which very few of those have.

And yet, the "68" costs very much less than a custom-built yacht of equal size.

SPECIFICATIONS:

Length, 68′ 3″ • *Beam, 14′ 0″* • *Draft, 3′ 6″* • *Gas capacity, 700 gallons*
Water capacity, 300 gallons • *Engine, 2—175 h. p. 6 cylinder Hall Scott* • *Speed, 17 m. p. h.*

a.c.f.

AMERICAN CAR and FOUNDRY COMPANY
217 West 57th Street • New York City

***Showrooms at* New York • Boston • Detroit**
Cleveland • Chicago • San Francisco

CONSOLIDATED

INSTRUMENTS are not only the most widely used in the aeronautical industry but are equally popular in the marine field where they are now standard equipment on the finest craft turned out by American boat builders. Consolidated products are precision instruments made of the finest quality materials to micrometer exactness demanded by both the flying and boating services in the interest of safer, swifter and more economical travel by air or water.

Consolidated instruments are non-corrosive and guaranteed for accuracy and long life. The instruments are available as separate units or in handsome panel ensembles of two, four, five and seven instruments.

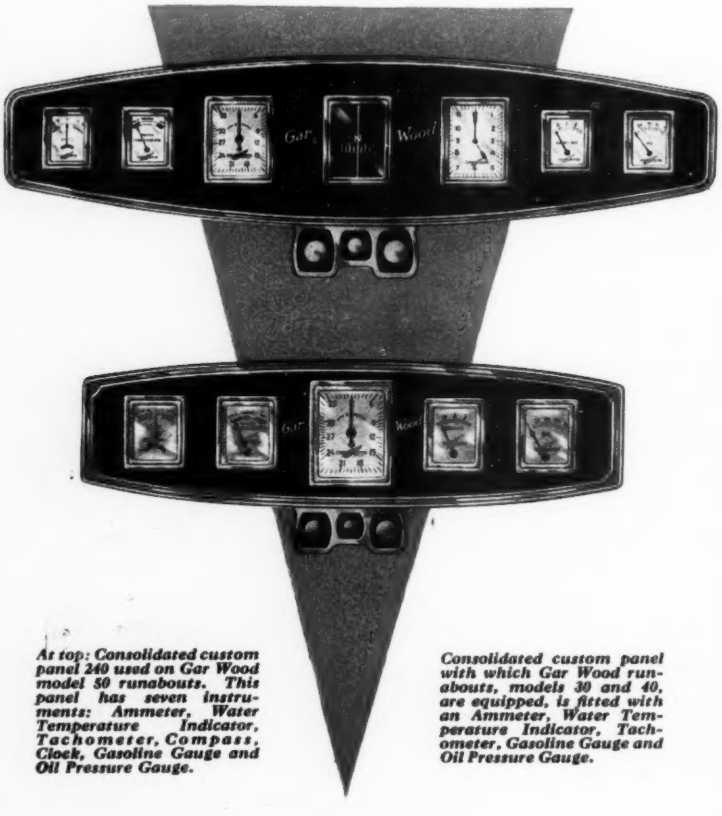
Our engineering department is at your command in the preparation of special panel designs and assemblies for either single or twin-screw installation. Do not hesitate to consult us.

CONSOLIDATED INSTRUMENTS

CONSOLIDATED INSTRUMENT CO. *of* AMERICA, Inc.
305 East 47th Street, New York City

Manufacturing Divisions
Julien P. Friez and Sons, Inc., Baltimore, Md.
Molded Insulation Co., Mt. Vernon, N. Y.
Aircraft Control Corp., Philadelphia, Pa.

Standard with GAR WOOD



At top: Consolidated custom panel 240 used on Gar Wood model 50 runabouts. This panel has seven instruments: Ammeter, Water Temperature Indicator, Tachometer, Compass, Clock, Gasoline Gauge and Oil Pressure Gauge.

Consolidated custom panel with which Gar Wood runabouts, models 30 and 40, are equipped, is fitted with an Ammeter, Water Temperature Indicator, Tachometer, Gasoline Gauge and Oil Pressure Gauge.

NO finer tribute can be paid any product than that which comes from its users, and especially so when its praise originates from such a well known boat builder as Gar Wood, who says:

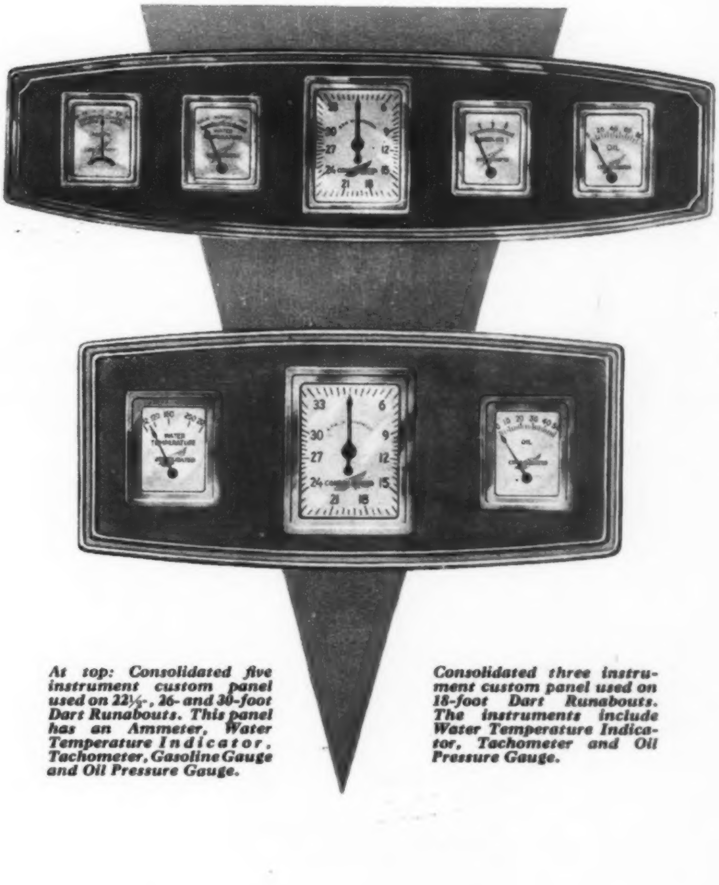
"We will use Consolidated instrument panels exclusively on all Gar Wood stock runabouts. After investigating all various types of instrument panels, which are available, we decided on Consolidated panels due to their pleasing designs, fine workmanship and suitability for marine use. Consolidated panels are the first that we have found which are designed primarily for marine use and their construction of non-ferrous materials renders them particularly suitable for this service."

CONSOLIDATED INSTRUMENTS

DART Standardizes on Consolidated

FROM Dart Boats, Inc., Toledo, Ohio, builders of high quality runabouts, comes this convincing testimonial:

"You will, no doubt, be interested in knowing that the decision to use Consolidated Instrument Panels was made after having investigated a goodly number of various makes of panels and found that your equipment, as designed strictly for marine use, came the nearest to meeting our requirements, which fact, together with the attractive appearance of your panel, carried considerable weight in deciding on Consolidated Instruments."

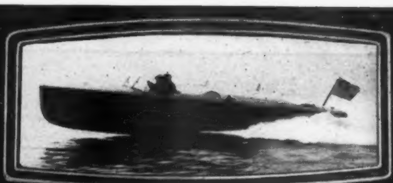


At top: Consolidated five instrument custom panel used on 22½-, 26- and 30-foot Dart Runabouts. This panel has an Ammeter, Water Temperature Indicator, Tachometer, Gasoline Gauge and Oil Pressure Gauge.

Consolidated three instrument custom panel used on 18-foot Dart Runabouts. The instruments include Water Temperature Indicator, Tachometer and Oil Pressure Gauge.

CONSOLIDATED INSTRUMENTS

HUCKINS FAIRFORM FLYERS

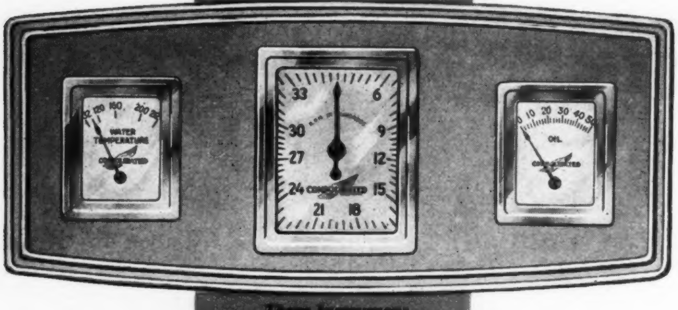


HACKER DOLPHIN RUNABOUTS

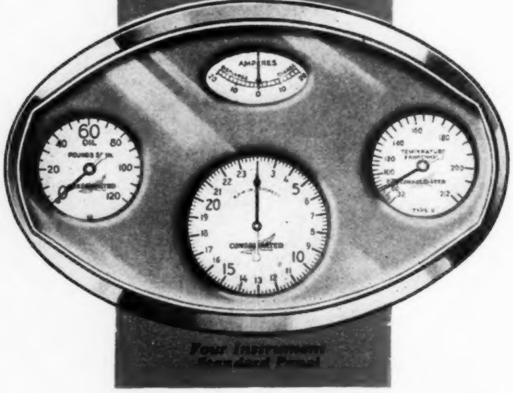
FLEETWING CRUISERS

WHEELER PLAYMATE CRUISERS

THE CONSOLIDATED



Three Instrument Standard Panel

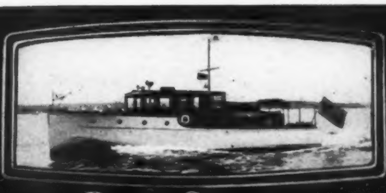


Four Instrument Standard Panel

AMONG the many boat builders who regularly equip their craft with Consolidated instrument panels are the following outstanding builders of standardized boats: Aeolian Co., Dawn Boat Corp., Dart Boats, Inc., Fleetwing Yacht & Shipbuilding Corp., Hacker Boat Co., Huckins Yacht Corp., Howard W. Lyon, Inc., Robinson Marine Construction Co., Wheeler Shipyards, Gar Wood, Inc., and others.

On this and the opposite page are illustrated four standard Consolidated marine instrument panels. Each of these panels as well as the instruments are made of non-ferrous material. The movement of each instrument is entirely enclosed and tightly sealed in a moisture-proof case. Panel and instrument bezels are chromium plated and the mats are finished in a beautiful French gray.

CONSOLIDATED INSTRUMENTS



DAWN CRUISERS

ACO SEABOATS

ROBINSON SEAGULL CRUISERS

SEA LYON RUNABOUTS

INSTRUMENT FLEET

THE Consolidated three instrument standard panel has a water temperature indicator, tachometer and oil pressure gauge.

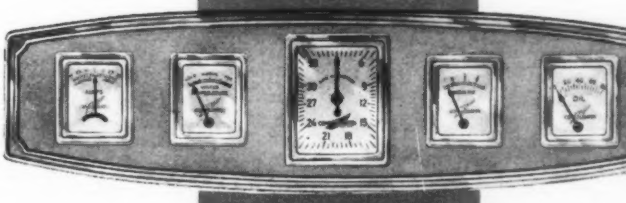
The four instrument standard panel is fitted with an ammeter, oil pressure gauge, tachometer, and distance type water temperature indicator.

In addition to ammeter, oil pressure gauge and tachometer, the five instrument standard panel has a water temperature indicator and gasoline gauge.

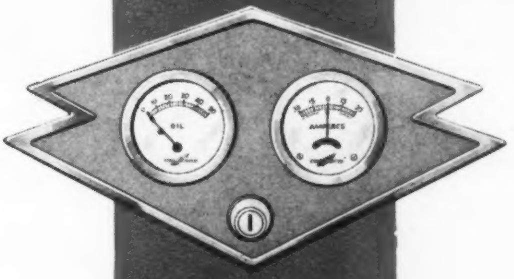
The standard three, four and five instrument panels are indirectly lighted from the rear by the flood light principle.

An ammeter and oil pressure gauge are furnished with the standard two instrument panel. This panel is also fitted with an ignition switch lock.

Brackets for attaching panels to dash boards are supplied with each standard panel.



Five Instrument Standard Panel



Two Instrument Standard Panel

CONSOLIDATED INSTRUMENTS

CONSOLIDATED COMPASS TYPE F

This compass is of the magnetic type with a built-in compensating unit which eliminates the use of troublesome loose magnets. It has a spherical magnifying cover lens which permits the use of a small dial and gives greater visibility. Compensating unit is readily accessible and all adjustments can be made without removing the compass. Type F compass mounts flush with the instrument board.

CONSOLIDATED FUEL PRESSURE GAUGE

5
0
10
FUEL
PRESSURE
CONSOLIDATED

To know that the carburetor on your engine is receiving an ample fuel supply is essential for maximum engine efficiency. The Consolidated fuel pressure gauge tells you at a glance the pressure at which fuel is being fed to the engine. The large figures and distinct graduation marks provide easy reading at considerable distance. This instrument is entirely enclosed and tightly sealed in a sturdy case preventing corrosion or deterioration from atmospheric conditions.

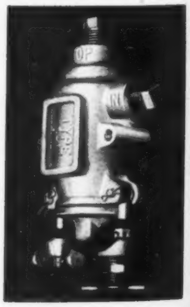
CONSOLIDATED AMMETER TYPE N

This instrument is of exceedingly rugged construction throughout. It is of the heavy duty type designed especially for marine service. The black dial sets off the white calibrations and pointer, insuring a quick and easy reading at a glance. The standard calibration is 30-30.

30 20 10 0 10 20 30
DISCHARGE
CHARGE
CONSOLIDATED

CONSOLIDATED FUEL STRAINER TYPE C-1

Constructed in accordance with U. S. Army Air Service specifications, this fuel strainer is admirably adapted for marine usage. The body is of aluminum and all fittings are brass. The Consolidated fuel strainer is one of the most useful accessories you can install on your power plant. It prevents impurities in the fuel from reaching the motor and enhances engine performance.



CONSOLIDATED INSTRUMENTS

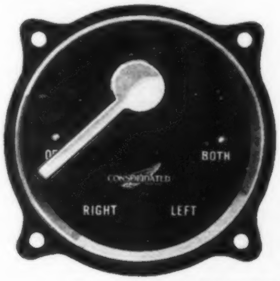
CONSOLIDATED TEMPERATURE GAUGE TYPE N

This instrument may be used either for a temperature reading of the cooling system or of the lubricating oil. For maximum efficiency you should have a temperature gauge for both cooling and lubricating systems. It is of the distance reading type with capillary tubing and expansion bulb. The movement is non-corrosive and securely sealed in a watertight case. Armored capillary tubing is supplied in standard lengths of ten feet. Special length tubing supplied on order.

160
140
180
120
TEMP °F
200
100
80
60
32
212
CONSOLIDATED

CONSOLIDATED IGNITION SWITCH TYPE N

The Consolidated type N double action ignition switch insures positive contact at all times. It is perfectly insulated to eliminate any possibility of short circuit. Enclosed in a Bakelite case, the operating mechanism is protected from moisture and corrosion. Switch positions are clearly marked on the dial in white lettering.



CONSOLIDATED OIL PRESSURE GAUGE TYPE N

60
40
80
20
100
OIL
PRESSURE
120
CONSOLIDATED

Is your lubricating oil maintaining proper viscosity and circulating through the lubrication system with ample pressure to all moving parts? It is important to know this if you want high motor efficiency and many years of engine service. The Consolidated non-corrosive oil pressure gauge, enclosed in a waterproof and dustproof case, gives an accurate pressure reading of the lubricating oil at a glance.

CONSOLIDATED INCLINOMETER

Does your boat ride on an even keel; does she list when at rest? The Consolidated inclinometer, which you can attach in a few minutes to the dash, gives you this information instantly. It is of the liquid damped, steel ball type, graduated ten degrees on either side of vertical. You should have one for your boat.

CONSOLIDATED INSTRUMENTS

15
20
25
30
35
40
45
50
55
60
65
70
R.P.M.
HUNDREDS
JONES TACHOMETER

OUTBOARD TACHOMETER

CARBURETOR mis-adjustment, weak ignition, fouled spark plugs, improper ratio of gasoline and oil mixture, worn pistons or rings, mis-alignment or poor propellor balance,—any one of these engine ailments will rob you of maximum power and speed. With a Consolidated outboard tachometer you can instantly detect the slightest falling off in R. P. M.'s.

The Consolidated outboard tachometer uses the famous Jones precision movement employed in finely-adjusted aviation and marine instruments, and widely known for its unfailing accuracy. A tachometer is a necessity for successful racing. There is none finer made than the Consolidated.

Full size illustration shows easily readable large dial of the Consolidated tachometer with heavy plate cover glass and polished water-proof case. Special mounting plate permits easy attachment to dash—permits easy adjustment to proper reading angle and removal of tachometer when not in use. Special right-angle type ball bearing motor attachment. Exclusive feature—six feet braided bronze flexible tubing with special process music wire cable.

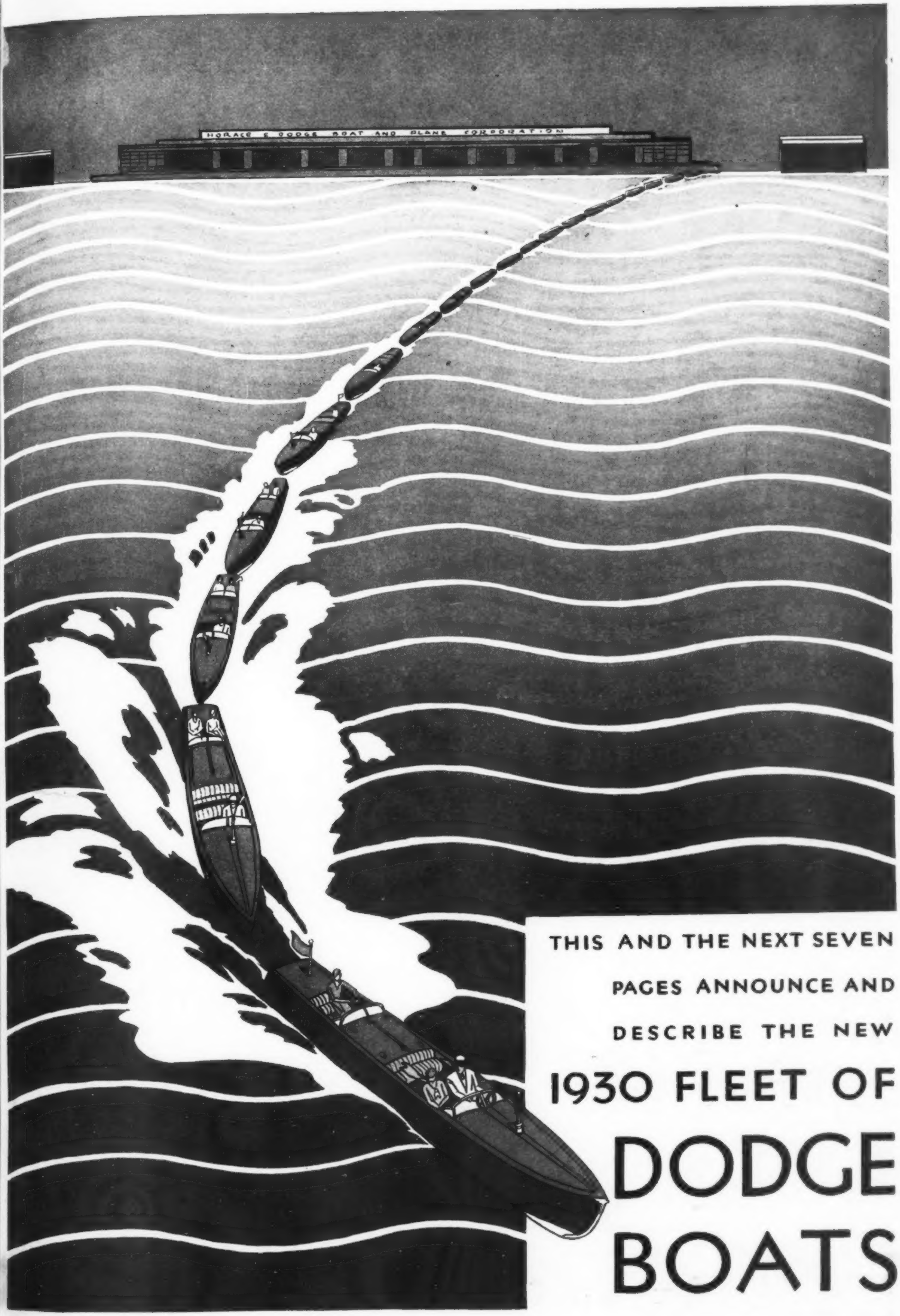
CONSOLIDATED INSTRUMENT CO. *of* AMERICA, Inc.
305 East 47th Street, New York City

Manufacturing Divisions
Julien P. Friez and Sons, Inc., Baltimore, Md.
Molded Insulation Co., Mt. Vernon, N. Y.
Aircraft Control Corp., Philadelphia, Pa.

IMPORTANT
SPECIFY MOTOR
NAME & MODEL
WHEN ORDERING

Jake Dunnell, well-known racer and in charge of design and construction of the famous Ludington Outboard Hydroplanes, heartily endorses the outboard tachometer in ascertaining the efficiency of both boat and motor.

CONSOLIDATED INSTRUMENTS


HORACE E. DODGE BOAT AND PLANE CORPORATION

THIS AND THE NEXT SEVEN PAGES ANNOUNCE AND DESCRIBE THE NEW

1930 FLEET OF DODGE BOATS

THE GREATEST SINGLE FORWARD STRIDE IN BOATING HISTORY CREATED THIS NEW FLEET

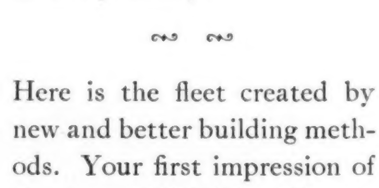
TO the millions who yearn for the uncrowded romance of bay and river, lake and sea, the pleasure of boating has been too long denied by the slow and costly building methods of former years. Since the first boat builder laid the first keel in Mediterranean sands, the method of building boats has remained practically the same.

∾ ∾

It has remained for Dodge to take a great forward step in boat building. As once before the name of Dodge forged ahead to leadership in a young and growing industry, so it is today. The new Dodge plant brings to the industry of boating new ideals and new ideas. Standardization, the watchword of the age, can and does produce boats of Dodge quality, at prices within the reach of every family.

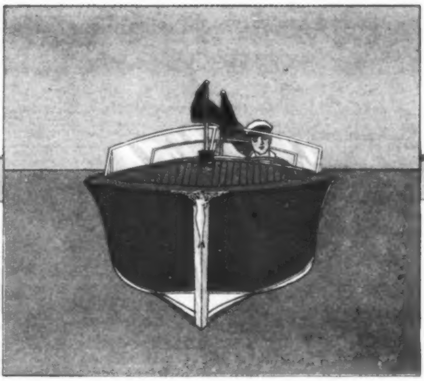
∾ ∾

Here is the fleet created by new and better building methods. Your first impression of the new 1930 Dodge Fleet is its very newness. From stem to stern, from keel to hoisting ring, each boat that bears the name of Dodge is new in conception and design, and new in fleet and purring power. Dodge Boats have always been known as leaders in quality and dependability. Here are new Dodge Boats as fine as any that ever bore the name o Dodge — but with greate power, higher speeds, and symmetrical stream-line beaut



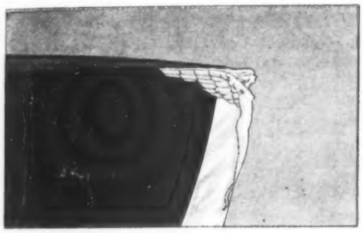
∾ ∾

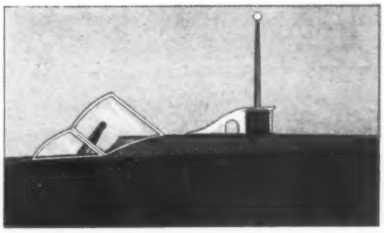
Read, on the following pages, the detailed specifications o the new Dodge Fleet. Then read the prices. No mistak has been made in these prices. You may now own a Dodge Boat, of full Dodge quality, completely equipped, at less than a thousand dollars. Now you may cruise in open water, in an amply powered, double-cabin express cruiser, luxuriously fitted, at a price that seems unbelievably low. The greatest values yet introduced to an eager public are to be found in the 1930 Dodge Fleet presented at the Silver Anniversary Boat Show.



FROM THE SIXTEEEN-FOOT RUNABOUT TO THE FORTY-FIVE-FOOT CRUISER

ALL HAVE THAT UNCOPYABLE QUALITY OF STYLE

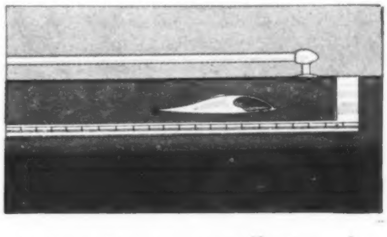




THE name of Dodge has always stood for dependability, a worthiness built upon a sound foundation of quality. To look at a Dodge Boat has always been a pleasure to the eye, for all Dodge Boats are beautiful. Now at lower-than-ever prices, the new Dodge Boats bring one more quality to the field of design. It is style—a stream-line smartness of design that adds greater power to make these boats still faster than before.

Look head-on at the bow of a new Dodge Boat. Even at rest it has the illusion of speed that seems to lift it out of hampering water. It is a deft handling of line in stream-line silhouette that does add vibrationless speed the moment the motor starts. Even the gunwale speaks of speed. No coaming mars the sleek and flowing line from stem to stern, for none is needed. In water rougher than many boats will weather, these new Dodge Boats keep their decks as dry as in a summer calm.

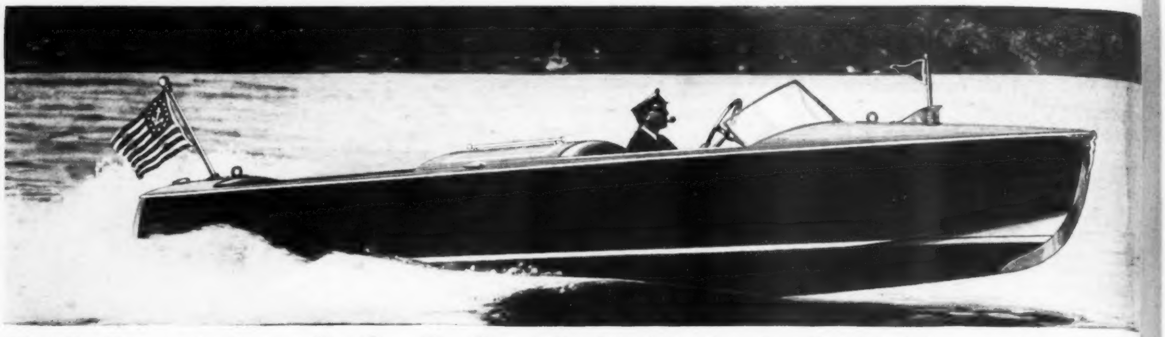
To the tiniest detail of engine compartment ventilator the streaming wave-line style is carried. You can know Dodge style, too, wherever you may see it. The Dodge symbol—a water nymph who has borrowed greater speed and grace from the air above—is on the bow in solid Nickel Silver.



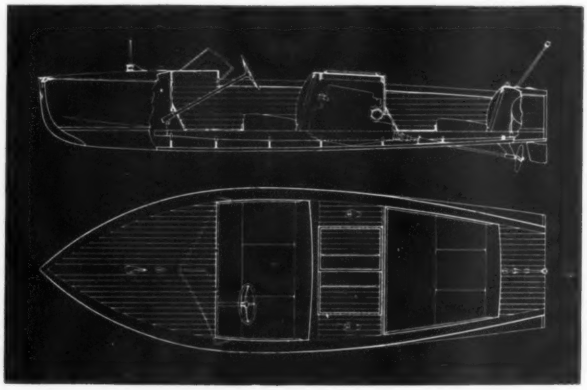
Standard Specifications

In every new Dodge Boat, from the smallest to the largest, construction is of the same unexcelled quality. Bottoms are double-planked, with canvas between the skins, impregnated with marine glue. All planking on decks, sides and bottoms, transoms and bulkheads, is of genuine mahogany.

Keelsons are of fir. Engine beds, keels, deck beams, stems, chines, frames and battens are of selected white oak. All planking is seam-battened. All fastenings are of bronze and brass. Struts and rudders are of manganese bronze, and the stuffing box of plastic bronze. Shafts are of Monel Metal. Solid Nickel Silver is used for all deck fittings. The natural mahogany is finished with the finest of spar varnish. Bottoms, below the white enameled boot top, are finished in anti-fouling green paint. Special Dodge Gear Shift Control on instrument board, allowing clear floor space, is standard on all models.



THE 16-FOOT RUNABOUT, $94



NEW—not only to the Dodge Fleet, but in the boating world—is the new 16-foot runabout by Dodge. It is genuine Dodge quality, from keel to flagpole. Nothing has been done to alter established Dodge quality. It is just a smaller Dodge. It is completely equipped, from self-starter button to electric lights, and powered by a Lycoming Marine Motor especially designed for silent speed. It is a luxurious boat at a price thought impossible before the age of Dodge in Motor Boating.

Specifications

Length: Overall, 16′ 3″; at waterline, 16′. Beam, 5′ 3″. Freeboard: Forward, 20″; aft, 14″. Draft, 16″. Planking, ⅜″ mahogany. Frames, ¾″ by 2½″. Propeller, 10″ diameter by 11″ pitch.

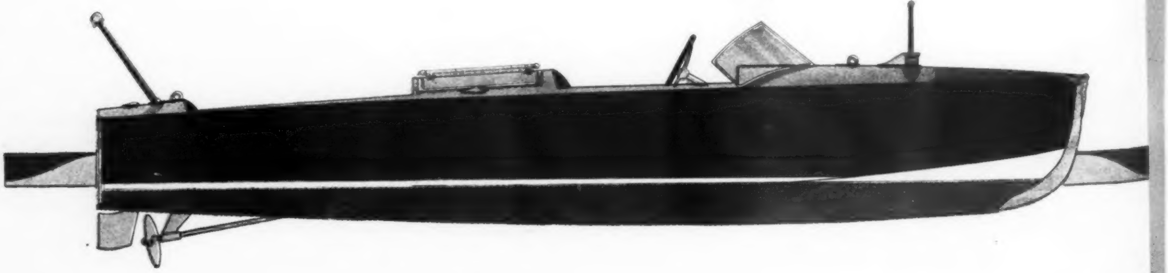
Shatter-proof glass, stream-line windshield. All deck fittings of solid Nickel Silver—combination bow light and bitt, 4 fender cleats, filling pipe and cap, piano hinges and rail on motor hatch, and hoisting rings.

Equipment includes: Automatic bilge bailer; automobile type steering wheel; 10-pound anchor with line; tie lines; cork fenders; fire extinguisher; set of tools; mahoga flagpole forward with burgee; ste flagpole with top electric light; set of electric running lights, a shipping cradle.

Instrument board, maho any; mounted with a meter, oil gauge, tac ometer, ignition and ligh ing switch, choke a starter button. Spar throttle and horn butt mounted on steeri wheel. Forward cockp seats three. After cockp seats two. Upholster blue, with Kapok-fille life-preserver cushions.

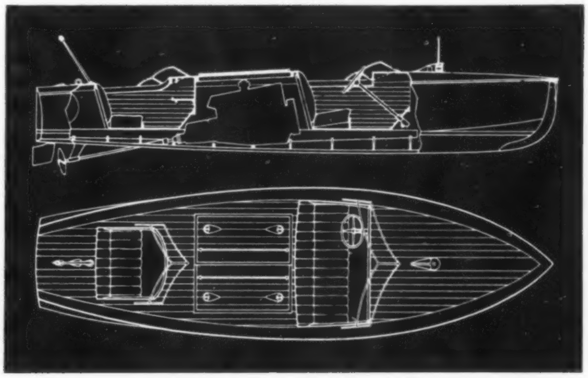
Motor: Lycoming, 4-cylinder, bore by 3¾″ stroke. 40 h. p. 3500 r. p. m. Full force feed lubri cation, gear type pump coolin system. Electric starter and gener-ator. Cylindrical gas tank unde after deck, capacity 13 gallons Speed, 25 miles an hour.

Price: $945, F. O. B. factory.



THE 21-FOOT RUNABOUT, $2100

EVEN for Dodge, this new 21-foot runabout is an achievement. Ride it out on lake or bay, in water that makes boats twice its size turn and run for cover. It rides as pretty as a gull. Turn it at full speed. It banks as smoothly as a swooping plane and keeps as dry. If it did not have the name of Dodge, you could scarcely believe the magic in this boat's performance. For the first time, the full thrill of motor boating is available to any one who can own a boat.



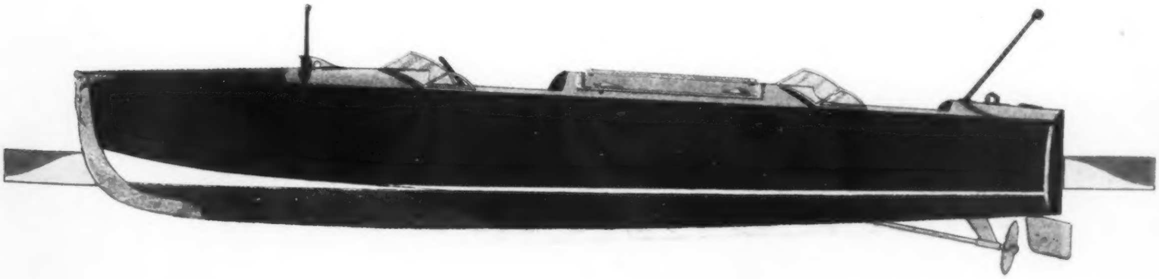
Specifications

Length: Overall, 21′ 6″; water-line, 21′ 2″. Beam, 6′ 4″. Freeboard: Forward, 27″; aft, 21″. Draft, $23\frac{1}{2}$″. Construction, $\frac{9}{16}$″ planking, mahogany. Frames, $\frac{3}{4}$″ by $2\frac{1}{2}$″, spaced 18″. Folding V-type windshield of shatter-proof glass. All deck fittings of solid Nickel Silver—combination bow light and bitt, 6 fender cleats, four engine hatch ventilators, piano hinges and hand rails on motor hatch; and hoisting rings attached to lifting pads at keel.

Equipment includes: Automatic bilge bailer and limberhole cleaner; 15-pound anchor with line; tie lines; cork fenders; fire extinguishers; life preservers; boat hook; set of tools; mahogany flagpole forward with burgee; stern flagpole with top electric light and yacht ensign; full set of electric running lights; and shipping cradle.

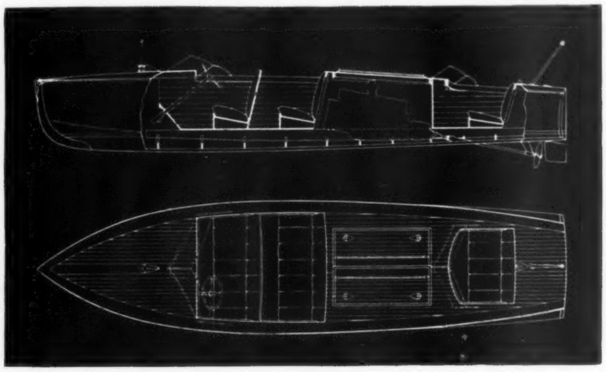
Instrument board, mahogany, indirect lighted; mounted with ammeter, oil gauge, motor meter, tachometer, ignition switch, choke button, starter button and cigar lighter. Special Duesenberg type automobile steering wheel, mounted with spark and throttle control, horn button and lighting switch. Forward cockpit seats four, after cockpit seats two. Upholstery blue, with removable cushions and backs of Nested Spring construction.

Motor: Lycoming Straight Eight, bore $3\frac{3}{8}$″ by $4\frac{1}{2}$″ stroke. 115 h. p. at 3000 r. p. m. Full force feed lubrication, gear type pump, oil cooler, electric starter and generator. Cylindrical gas tank under after deck, capacity 35 gallons.
Speed: 35 miles an hour.
Price: $2100, F. O. B. factory.



THE 25-FOOT RUNABOUT, $2500

THE new Dodge 25-footer is a beautiful expression of design, of seaworthiness, and speed worthy of the name of Dodge. In this popular size Dodge offers no less than three distinct and separate models, each a value previously unheard of for a boat in this size, of anything that approaches Dodge quality. It offers to experienced boatman and new owner alike a feeling of surging power, of fleet and easy speed. It is a revelation of engineering skill and craftsmanship.



Specifications

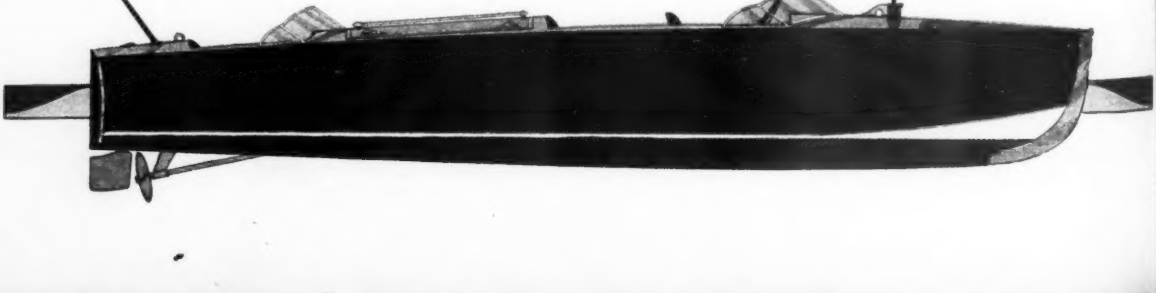
Length: Overall, 25′; water-line, 24′ 8″. Beam, 6′ 3¼″. Freeboard: Forward, 29″; aft, 23″. Draft, 23″. Construction, 9/16″ planking of genuine mahogany. Frames, ⅞″ by 2½″, spaced 20″. V-type folding windshields of shatter-proof glass. All deck fittings of solid Nickel Silver—combination bow light and bitt, 6 fender cleats, four streamline engine hatch ventilators, special filling pipe and cap for gas tank, piano hinges and hand rails on motor hatch; and hoisting rings attached to lifting pads at keel.

Equipment includes: Automatic bilge bailer and limberhole cleaner; 20-pound anchor and line; tie lines; 6 cork-filled life preservers; boat hook; 2 cork fenders; fire extinguishers; set of tools; mahogany flagpole forward with burgee; stern flagpole with top electric light and yacht ensign; and shipping cradle.

Instrument board, mahogany, indirect lighted; mounted with ammeter, oil gauge, motor meter, tachometer, ignition switch, choke, starter button and cigar lighter. Special Duesenberg type automobile steering wheel, mounted with spark and throttle control, horn button and lighting switch. Full set of electric running lights. Forward cockpit seats seven. (Sedan seats five forward.) Rear cockpit seats two. Upholstery blue, with removable seats and backs of Nested Spring construction. Cylindrical gas tank under after deck, capacity 42 gallons.

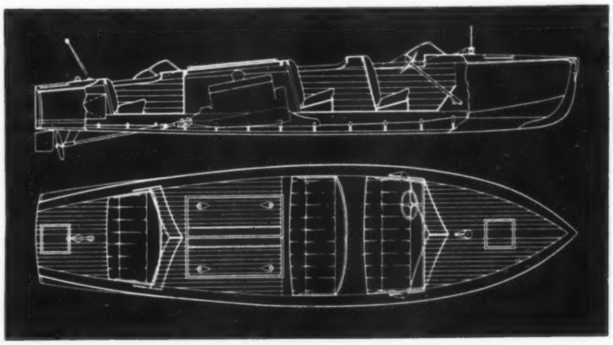
Motors: Model 3: 125 horse power Lycoming Straight Eight, speed 32 miles an hour. Model 4: 165 horse power Lycoming Straight Eight, speed 38 miles an hour. Model 10 Sedan: 165 horse power Straight Eight Lycoming Motor, with a speed of 34 miles an hour.

Prices: Model 3, $2500. Model 4, $3200. Model 10 Sedan, $3900.



THE 28-FOOT RUNABOUT, $3700

LUXURY that outshines that of ancient despots, power that until now could not be controlled, beauty that rides unchallenged in any of earth's waters, now is offered to those who love fine boats. With all of its grace and luxury of fitting, the Dodge 28-footer dares to match its speed with many boats designed and built solely for the racing course. It is the honest Dodge belief that there can be no finer boat—and yet the cost is a modern miracle of value made possible by Dodge achievement in production.



Specifications

Length: Overall, 28′ 6¾″; waterline, 28′. Beam, 7′ 5″. Freeboard: Forward, 35½″; aft, 21″. Draft, 24½″. Construction, ⅜″ planking on bottom, 9/16″ on sides and deck, of mahogany. Frames: Bottom, 1¼″ by 2½″; sides, ⅞″ by 2½″, spaced 19″.

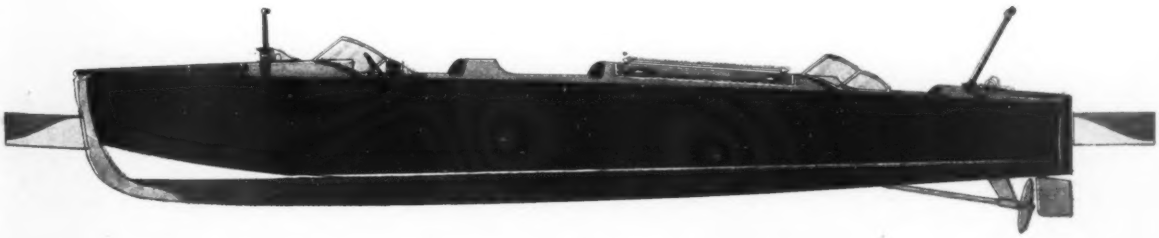
V-type folding windshield of shatter-proof glass. All deck fittings of solid Nickel Silver—all electric lights, 8 fender cleats, 4 stream-line engine hatch ventilators, special filling pipe and cap for gas tank, piano hinges and hand rails on motor hatch, and hoisting rings attached to lifting pads at keel.

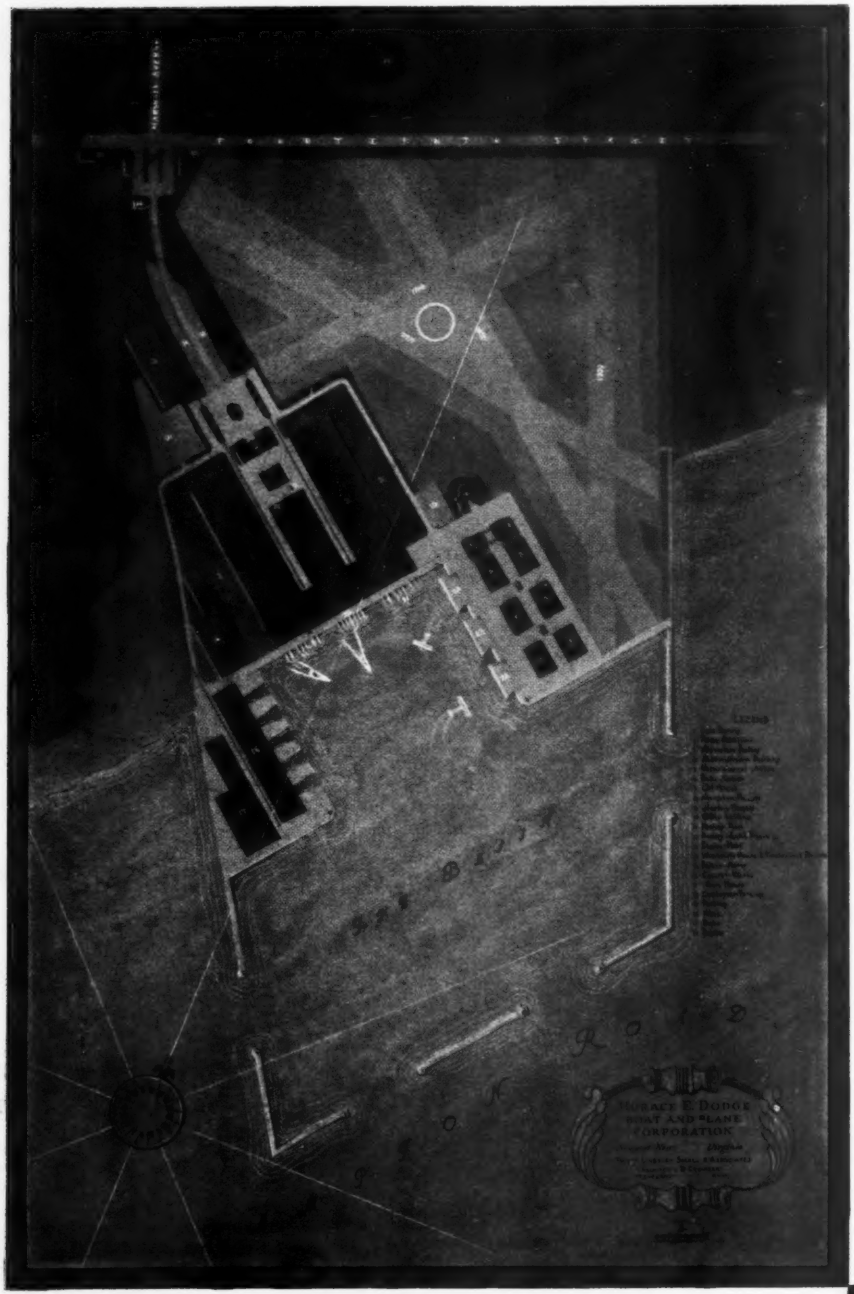
Equipment includes: Automatic bilge bailer and limberhole cleaner; 28-pound folding anchor with line; tie lines; 4 cork fenders; 4 standard fire extinguishers; set of tools; 2 boat hooks; 8 cork-filled life preservers; mahogany flagpole forward with burgee; stern flagpole with top light and yacht ensign; full set of electric running lights and trouble light; and shipping cradle.

Instrument board, mahogany, indirect lighted; mounted with ammeter, oil gauge, motor meter, tachometer, ignition switch, choke, starter button and cigar lighter. Special Duesenberg type automobile steering wheel, mounted with spark and throttle control, horn button and lighting switch. Forward cockpit seats eight. After cockpit seats two. Upholstery blue, with removable seats and cushions of Nested Spring construction. Two cylindrical gas tanks under rear deck, capacity 40 gallons each.

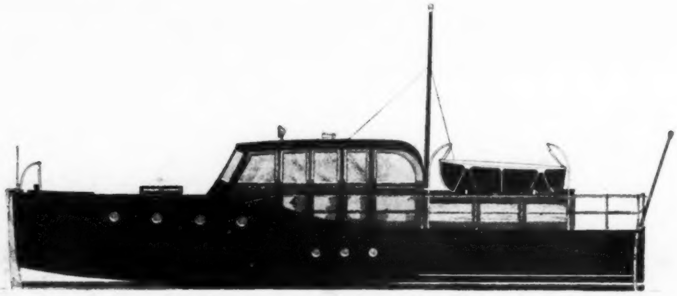
Motors: Model 5: Lycoming Straight Eight, 165 horse power, speed 32 miles an hour. Model 6: Lycoming 12-cylinder, 300 horse power motor, speed 45 miles an hour. Model 11: De Luxe Sedan, 300 horse power Lycoming 12-cylinder motor, speed 38 miles an hour.

Prices: F. O. B. factory: Model 5, $3700. Model 6, $4500. Model 11, De Luxe Sedan, $5300.





THE MODERN HOME OF THE MODERN MOTOR BOAT



Today, facing proudly out over the waters of Virginia's Hampton Roads, the new Dodge plant bears witness that the boating business has come of age. Nothing has been spared, no possible need unheeded, in building for the future of this growing industry. A yacht basin and airplane landing field of superlative design prepare for vastly greater future needs.

Most of all, this modern plan that builds its boats upon tide water was designed for o clear purpose—that is, to buil boats as fine as men and ma terials can make them, but a efficiently, and therefore a low in cost, as modern ma production facilities permit.

To those who know boats i may sound unbelievable tha a boat of true Dodge qualit can be built for less than thousand dollars. Yet it true. A trim and beautif sixteen-foot runabou staunchly and dependabl made of oak and mahogan and priced at $945, has all th quality that Dodge knows well how to build into boat

The Dodge 45-foot doubl cabin Express Cruiser, show at the left, equipped with tw Lycoming 300 horse power l cylinder motors, and tw screws that drive it at thirty five miles an hour, is offere to the aristocrats of moto boating at the price of $27,50 These two extremes of valu demonstrate more than word can tell the efficiency in pro duction that the world's mos modern motor boat buildin plant can accomplish.

DODGE BOATS

HORACE E. DODGE BOAT AND PLANE CORPORATION, NEWPORT NEWS, VIRGINIA. SALES OFFICE, 3 EAST 52ND STREET, NEW YORK, N.

AGAIN

THESE VALUES ARE

UNEQUALLED

! ! ! ! ! !

LAST year Richardson took yachting out of the luxury class with the Cruisabout, a 28 foot, 11 mile an hour Cruiser at the price of $3,585.00.

This year Richardson values are again unequalled. The Richardson 1930 Cruisabouts are 29 feet long, and have many refinements and improvements as standard equipment that were extras on last year's model. The low price of $3,585 for the new Richardson 1930 Cruisabout is a value unequalled in the history of yachting.

The Single Cabin 1930 Cruisabout 29 feet long is a luxurious, roomy, day and cruising boat with a 6-60 Gray Motor and a 13 mile speed. Cabin accommodations are for four; the cockpit is large enough for more than a dozen people. This Cruisabout, the flagship of the Richardson fleet, is priced the same as last year, at $3,585.

The maximum cruising accommodations and privacy are found on board the 1930 Double Cabin Cruisabout 29 feet long. Forward is a large main cabin for four people; aft, a stateroom cabin for two; amidship is a cockpit seven feet long with a large cushioned seat and floor space for three or four yacht chairs. The speed, of course, is 13 miles an hour with a 6-60 Gray Motor installed and the price for this floating apartment with every convenience is $4,185.

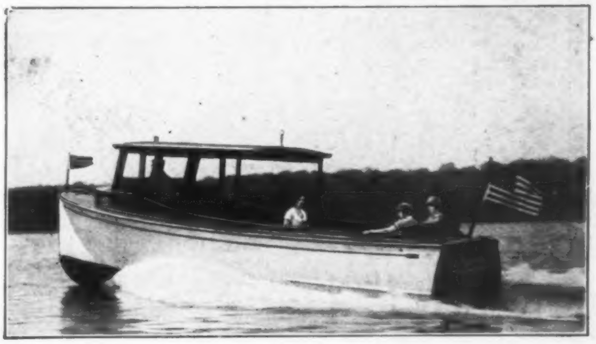
The ideal craft for day boating, fishing, swimming, ferry and passenger service is the 1930 Day Cruisabout 29 feet long with a "cuddy" cabin at the bow and a cockpit 16 feet long. Powered with an 8 cylinder 110 H.P. motor to maintain 18 mile speed, the price is $3,685.

See these unequalled Cruisabout Values at the Silver Anniversary Motorboat Show, at the dealers listed below or write for free booklet "E-30."

RICHARDSON BOAT CO., INC.
350 Sweeney Street, North Tonawanda, N. Y.

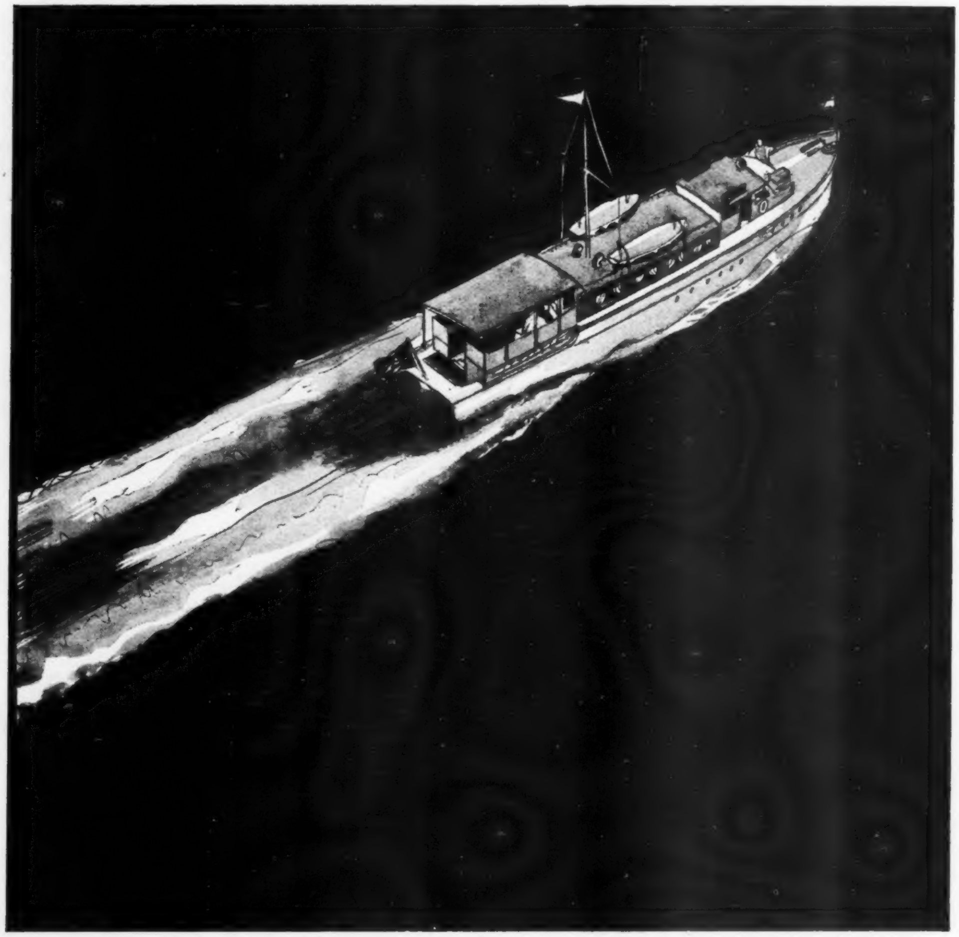
CRUISABOUTS ARE DISPLAYED BY

Bruns-Kimball & Co., 5th Ave. and 15th St., New York City, or 102 So. Fourth St., Philadelphia, Pa.; Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass.; F. D. Homan, 78 Riverside Ave., Amityville, L. I., N. Y.; N. J. Shea, 1424 Lauderdale Ave., Lakewood, Ohio; Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit, Mich.; A. M. Deering, 1454 Builders Bldg., Chicago, Ill.; Volney E. Lacey, Charlotte Station, Rochester, N. Y.; George Bender, Erie Yacht Club, Erie, Pa.; Henry Pohl, Inc., On the Causeway, Miami, Fla.; Electric Supply Co., 210-21st St., Galveston, Texas; T. B. F. Benson, 371 Bay St., Toronto, Ont., Canada; C. O. Horstman, 813 So. Washington St., Peoria, Ill.



Richardson 1930 Cruisabouts

GOLDEN DAYS AND SILVER WATERS



FROM the hottest days of midsummer, this man escapes at will—his sweltering office, his land-locked home are left behind. He is off on the cool, flashing sea to a vacation in Maine!

Quiet, peace, serenity are his . . . long, lazy hours fly by in a splendid procession . . . they show him the changing coastline of a hundred ports and beaches. A salt wind freshens . . . the white foam churns beneath his cruiser . . . his pleasure is as deep as the ocean, as timeless as a primitive world before time began!

For every day on the water is a fresh adventure—whether you go for an extended vacation, a week-end at Marblehead or simply to cruise . . . to fish . . . to drift.

It is true that few men can own such a servant as the boat we speak of. But the man who does, knows summer at its best. He can use his boat to commute to his offices, away from the clatter and dust of trains and motor cars. In his leisure hours he finds in it a thrill and a diversion, not only for himself but for his friends.

And whether he moves so slowly as to scarcely stir a ripple or speeds over the Sound at thirty-five to forty miles an hour—his boat will give him unfailing performance, because its engine is a Wright Typhoon.

WRIGHT TYPHOON

Address inquiries to Marine Engine Division

WRIGHT AERONAUTICAL CORPORATION
Paterson, New Jersey

FEBRUARY, 1930

Vol. XLV, No. 2

MoToR BoATinG

FIFTY-SEVENTH STREET
AT EIGHTH AVENUE
NEW YORK, N. Y.

Edited by

CHARLES F. CHAPMAN

MOTORBOAT SHOW NUMBER

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CALENDAR OF COMING EVENTS

February 21, 22—Palm Beach Yacht Club Regatta, Palm Beach, Fla., Com. W. J. von Behren, Citizens Bank Bldg., West Palm Beach, Fla.

March 25-26—Miami Beach, Fla. C. F. Chapman, 959 Eighth Ave., New York City.

March 29-30—Havana, Cuba. Rafael Posso, Habana Yacht Club, Havana, Cuba.

April 4-5—Jacksonville, Fla. Florida Yacht Club, Jacksonville, Fla.

April 23-30—Pacific Coast Boat Show, San Francisco Auditorium, San Francisco, Calif.

May—Spring Motor Boat Show. Sanctioned by National Association of Engine and Boat Manufacturers, Navy Pier, Chicago, Ill.

Monday Evenings—Beginning January 27—Instruction classes in Small Boat Handling, given by the Brooklyn Power Squadron at the Sheepshead Bay Yacht Club, Brooklyn, New York.

Tuesday Evenings, Beginning January 28—Instruction classes in Small Boat Handling given by the New York Power Squadron, Washington Irving High School, New York City.

Published monthly by the International Magazine Company, Inc., at 57th Street, at Eighth Avenue, New York City.

Ray Long, President
Thomas J. White, Vice-President
Austin W. Clark, Treasurer
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Single copies, this issue, One Dollar. Yearly subscription in the United States and Canada, $3.00. In foreign countries, $4.00. When you receive notice that your subscription has expired it is best to renew it at once, using the blank enclosed. When changing an address, give the old address as well as the new and allow five weeks for the first copy to reach you. Copyright, 1930, International Magazine Company, Inc. MoToR BoatinG is fully protected by copyright and nothing that appears in it may be reprinted wholly or in part without permission.

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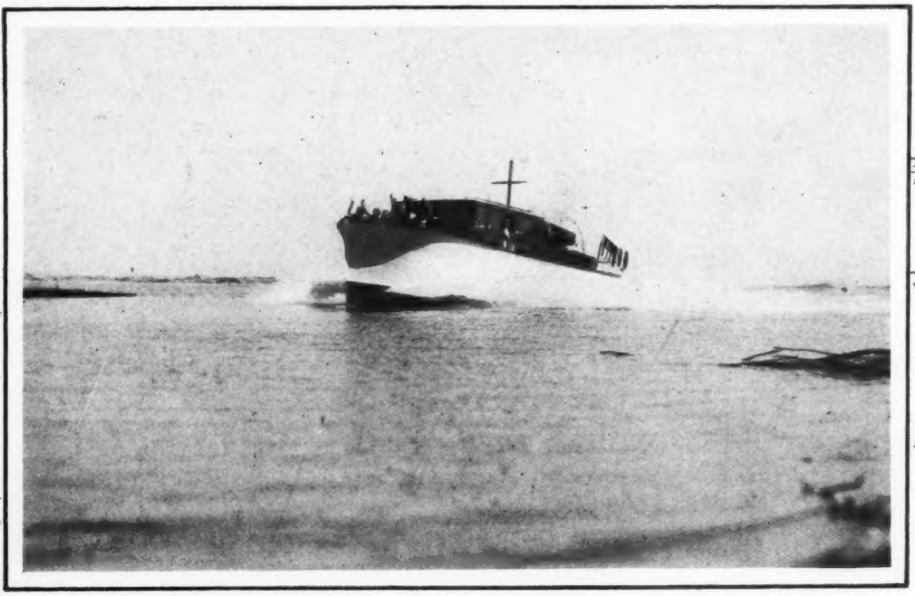

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AMERICAN MOTOR BOAT RECORDS

MILE TRIALS

(Average of 6 One Mile Runs)

Miss America VII, owned by Gar Wood, at Miami Beach, Florida, March 23, 1929. Built by Gar Wood, Packard motors. Speed 93.123 m.p.h.

GOLD CUP CLASS

625 cubic inch boats

Fastest heat (30 miles) Hotsy Totsy, owned by Caleb Bragg, Greenwich, Conn., 1927. Time, 35:06:83; speed 51.261.

Fastest lap (3 miles), Imp, owned by Richard F. Hoyt, Manhasset Bay, 1926. Time, 3:22; speed, 53.58.

Total race (90 miles), Imp, owned by Richard F. Hoyt, Red Bank, N. J., 1929. Time 1:51:33.48, speed, 48.405.

UNLIMITED HYDROPLANE

Fastest heat (30 miles), Miss America, owned by Gar Wood, Detroit, 1920. Time, 25:44; speed, 70.0.

Fastest lap (5 miles), Miss America, owned by Gar Wood, Detroit, 1920. Speed 71.4.

Total race (90 miles), Miss America, owned by Gar Wood, Detroit, 1920. Time, 1:28:07; speed, 62.0.

DETROIT SWEEPSTAKES

Fastest lap (3 miles), Packard Chris Craft II, owned by Colonel J. G. Vincent, Detroit, 1925. Speed, 58.95.

Total race (150 miles), Packard Chris Craft II, owned by Colonel J. G. Vincent, Detroit, 1925. Time, 2:41:47.10; speed, 55.65.

BRITISH INTERNATIONAL TROPHY

UNLIMITED HYDROPLANES

Fastest heat (30 nautical miles), Miss America VIII, owned by Gar Wood. Detroit, Sept. 2, 1929. Speed, 75.287 m.p.h.

Fastest lap (5 nautical miles), Miss America VIII, owned by Gar Wood, Detroit, Sept. 2, 1929. Speed 79.362 m.p.h.

12 HOURS

Rainbow VII, owned by Harry B. Greening, Lake Rosseau, Canada. Sept. 30, 1929. Total 723.92 miles. Running time 11:27:28. Average speed 63.17 m.p.h.

24 HOURS

Rainbow IV, owned by Harry B. Greening, Lake Rosseau, Canada, October 2-3, 1925. Total miles, 1218.88. Speed 50.78.

1½ LITER CLASS (TRIAL RUNS)

Boat driven by Ralph Snoddy at Newport Beach, Calif. Oct. 6-7, 1929. Built by Hacker. Miller engine. Speed 45.726 nautical m.p.h.; 52.585 statute m.p.h.

In Competition, Little Spitfire, owned by J. H. Rand, Jr., Detroit, September 3, 1927. Speed 42.17.

151 CLASS—UNLIMITED

1-mile straightaway, Spitfire V, owned by J. H. Rand, Jr., Albany, N. Y. July 5, 1927. Speed 62.82.

In competition, Spitfire V, owned by J. H. Rand, Jr., San Diego, Calif. December 12, 1927. Speed 55.42.

One lap in competition, Miss California, owned by Loynes-Harris, San Diego, Calif. December 12, 1927. Speed 59.68.

151 CLASS LIMITED

In competition, Miss California, owned by Dick Loynes, at Sarasota, Florida. March 8, 1929. Speed 49.20 m.p.h.

Miss California, owned by Dick Loynes at Balboa, Calif., Dec. 4, 1929. Built by Dick Loynes. Miller engine. Speed 54.729. m.p.h.

340 CLASS

Miss California, owned by Loynes-Harris, Houston, Texas. July 2, 1927. Speed 50.99.

510 CLASS

Miss Houston IV, owned by Frank H. Robertson, Louisville, Ky. July 5, 1926. 10 miles—in competition. Speed 51.28.

7⅛ miles, Miss Kemah, owned by Henry Falk, Houston, Texas. July 4, 1927. Speed 53.41.

One Mile Trials—Miss Houston IV, owned by Frank H. Robertson, Louisville, Ky. July 5, 1926. Speed 53.43.

725 CLASS

5 Miles—Helen, owned by M. J. A. Mitchell, Louisville, Ky. July 5, 1926. Speed 61.22.

Mile straightaway, Doc's II, owned by I. R. Van Sant, Peoria, Illinois. October 11, 1925, winning King of Belgians' Trophy. Speed 61.77.

SINGLE ENGINE HYDROPLANES

1 mile, Miss Chicago, owned by Sheldon Clark, Detroit. Sept. 3, 1921. Speed 72.86.

15 miles in competition, Fore, owned by W. D. Foreman, Cincinnati, Ohio. September 29, 1923. Speed 64.75.

OUTBOARD RECORDS

The official Outboard Racing Rules adopted by all Associations for 1929 recognize American records made only over distances of five, six, ten and fifteen miles and mile trials made over statute and nautical miles in each of the several classifications of engines, by drivers of Divisions I and II.

It must be emphasized that records under these rules are AMERICAN records and NOT World records.

MILE TRIALS, STATUTE MILES

CLASS A, DIVISION I

Blue Streak, driven by Margaret Mullin at Balboa, Calif., Dec. 4, 1929. Built by Elsinore. Lockwood engine. Speed 27.85 m.p.h.

CLASS A, DIVISION II

Blue Streak, driven by Church Hall, at Balboa, Calif., Dec. 4, 1929. Built by Elsinore. Lockwood Engine. Speed 28.4 m.p.h.

CLASS B, DIVISION I

Baby Brontosaurus, driven by Billy Lyon at Balboa, Calif., Dec. 4, 1929. Built by Crandall. Johnson engine. Speed 43.974 m.p.h.

CLASS B, DIVISION II

Crandall Comet, driven by Chas. Holt, at Balboa, Calif., Dec. 4, 1929. Built by Crandall. Johnson engine. Speed 43.94 m.p.h.

CLASS C, DIVISION I

Black Maria V, driven by Mildred Milde, at Newport Beach, Calif., Oct. 6-7, 1929. Built by Al Thomson. Evinrude C engine. Speed 43.711 m.p.h.

CLASS C, DIVISION II

Black Maria V, driven by Al Thomson, at Newport Beach, Calif., Oct. 6-7, 1929. Built by Al Thomson. Evinrude C engine. Speed 43.192 m.p.h.

CLASS D, DIVISION I

Crandall Comet, driven by Billy Lyon, at Balboa, Calif., Dec. 4, 1929. Built by Crandall. Johnson engine. Speed 47.15 m.p.h.

CLASS D, DIVISION II

Blue Streak, driven by H. G. Ferguson, at Balboa, Calif., Dec. 4, 1929. Built by Elsinore. Johnson engine. Speed 49.34 m.p.h.

CLASS E, DIVISION I

Fresno Flyer, driven by Dick Lyones at Balboa, Calif., Dec. 4, 1929. Built by Ashbridge. Johnson engine. Speed 33.78 m.p.h.

CLASS E, DIVISION II

Wildcat, driven by F. E. Ludolph, at Peoria, Ill., Oct. 15, 1929. Built by Hooton. Elto Engine. Speed 39.353 m.p.h.

(Continued on page 172)

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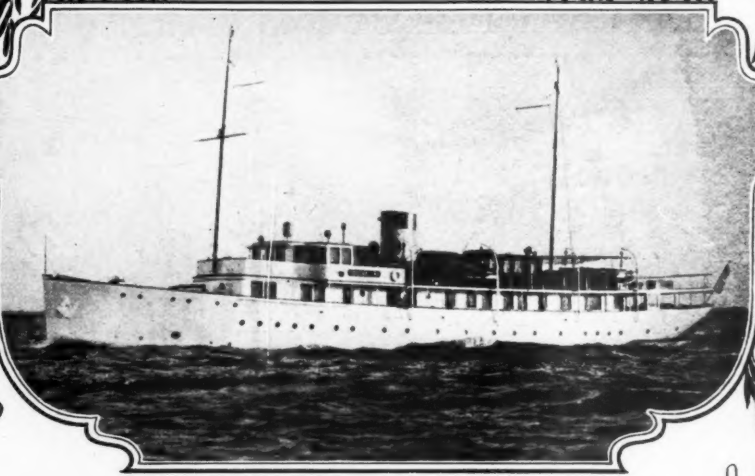

Olive K. Length, 170 ft. Beam, 26 ft. Draft, 9 ft., 6 in.

Luxury on the Water

THE seven seas have never before been host to a ship with the advanced engineering features embodied in the new yacht *Olive K*, designed by Cox and Stevens, Inc., and John H. Wells, Inc., and built by Defoe Boat and Motor Works for Charles F. Kettering, president, Research Laboratories, General Motors Corporation. This new yacht, Winton-powered, exemplifies the twentieth-century conception of luxury on the water. The main engines are two New-type, airless injection Winton-Diesel Engines - 500 H. P. each - giving the yacht a speed in excess of fourteen knots an hour. Most interesting is a special synchronizing device, developed by Mr. Kettering, which makes it possible to run both engines at the same speed at all times, so that the two main engines operate practically as a twelve-cylinder unit. This is a new development in marine engineering. Its application by one of America's foremost engineers, and his installation of smooth-performing Winton-Diesel Engines in his private yacht, are of interest to all yacht owners.

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LAND OR SEA—WHICH?

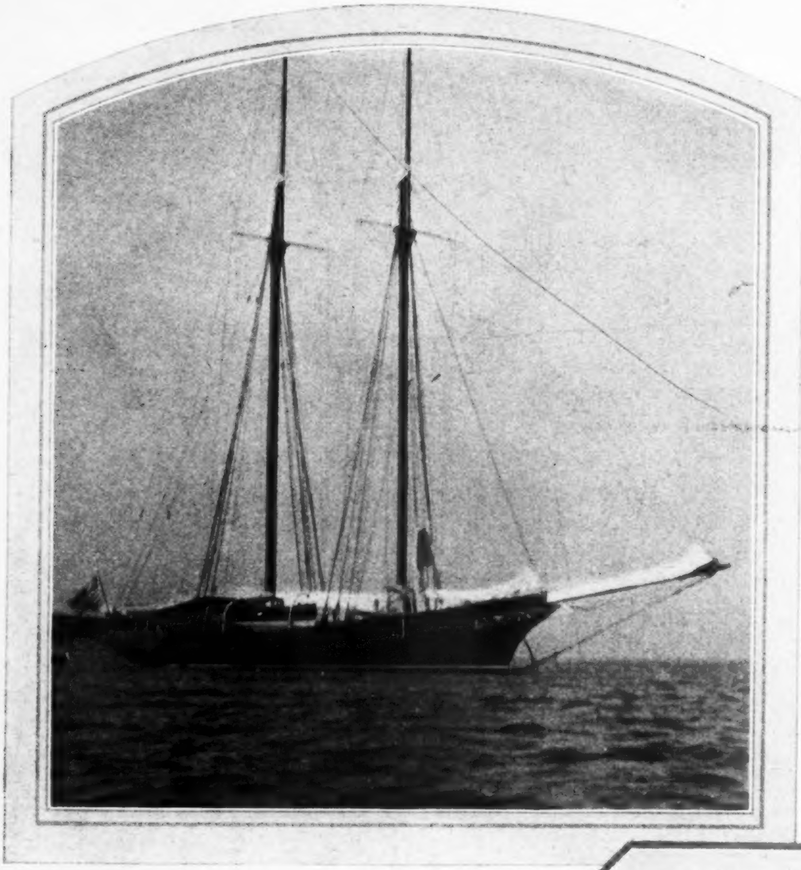
Own a Boat and Decide for Yourself—Learn of the Joys of Cruising and the Pleasures Which Follow Ownership

By FRANKLIN MARTIN

"WHERE do you think you're going? Back up. I've a good mind to give you a ticket. Who do you think you are anyhow and how do you get that way?" The speaker was a burley son of Ireland clothed in a blue uniform, brass buttons AND the majesty of the law. The place was Providence, R. I. The audience consisted of a timid peaceful law-abiding citizen of the land of the free and the home of the brave named J. S. Walpole, his loving wife and four carefully brought up results of their happy union. The inspiration for the speech was that Walpole, in making a left turn in the middle of the town, had driven his automobile to the right of a blinker as per universal custom instead of passing to the left as per local rule of which he knew nothing. All traffic was stopped in four directions while Mr. Walpole, feeling like a nervous handcuffed criminal, was forced to back up and then drive around to the left of the blinker, while the horns of a few hundred other cars honked in angry derision at the delay. Our hero was thankful to escape without a ticket, but the incident did not make him feel puffed up with pride. It was not his fault in the least, but he could distinctly feel that his reputation as a driver had gone down several pegs in the estimation of the back seat drivers of his otherwise admiring family.

The Walpoles were taking a pleasure trip in a brand new car which was their pride and joy. The head of the family had been driving for many years and was a good average driver. He had an average income, enjoyed a vacation in the great open spaces where men are men, and liked to give his family a good time. The above experience was only one of many enjoyed by the family during a carefully planned vacation on wheels. There were others, to wit:

They found that the cost of spending the night in any good hotel, which gave the style of living to which they were accustomed at home, was sufficient to buy gasoline for two to three thousand miles in the car. This seemed out of proportion. Mr. Walpole wore a



Schooner yacht Constellation in Boston Harbor

Ten year old and his dog in Barnacle

favorite old hat on the trip which might have been sold in the open market for about a quarter. When in Rome one must do as the Romans do, and Walpole found that he must buy his old hat over again every time he came out of a swell dining room. At the end of the trip he figured the original cost of the hat plus the parking charges brought his personal overhead expense up to thirty dollars. The universal habit of buying service, food or merchandise from the management, and then paying the wages of the hireling who takes your money away, adds considerably to the expense of this mode of living. The usual cost of washing the car and keeping it overnight was three dollars, but in the morning there was always an attendant flicking off a speck of dust with one hand and holding out the other hand for his share of the booty. A brand new car, after spending the night in a well packed garage, may get over it, but it will never look the same again.

In New York the happy tourists actually spent fifteen minutes driving three blocks which they could have walked in less than five. While halted at a traffic light, a taxi cab squeezed in beside them and crumpled up a rear fender. Everywhere the cops beckoned the driver to step on the gas. It was a mad scramble of a few yards of wild speed and car wrenching emergency stops. A few miles of driving in New York would shatter the nerves of anyone but the most hard boiled taxi driver. Everywhere was at least a double line of cars creeping and jerking along, with a sudden burst of speed for a few feet and then a long stop. Courtesy among drivers seemed a thing of the past. It was everyone for himself trying to squeeze an inch or two ahead regardless of fenders or feelings.

It was not until Walpole got through the Hudson Tunnel and out to East Orange, N. J., that he had a chance to really step on it as per instructions of a million cops. He was on an open road with little traffic and was modestly stepping on it at the rate of twenty-four miles per hour when he heard a wicked putput behind him, a motor cycle cop ranged alongside and a harsh voice instructed him to "Pull over to the curb." A ticket was made out and absolutely no other information could be obtained as to how fast he was supposed to be going or how fast he was allowed to go. He learned in court two days later that a local rule prohibits speeding at over twelve miles an hour. All cars travel faster than this, but the technical statute is on the books and puts an immediate quietus on any argument which might be put up by the unfortunate driver picked out by the local cop. Two days in a hotel and the fine left little change out of a hundred dollar bill.

When free from the clutches of the law, the hardened criminal again took to the open road and resolved never more to be caught in such a trap. He drove carefully and prayerfully out in the open country with the whole family nervously watching for cops, like a

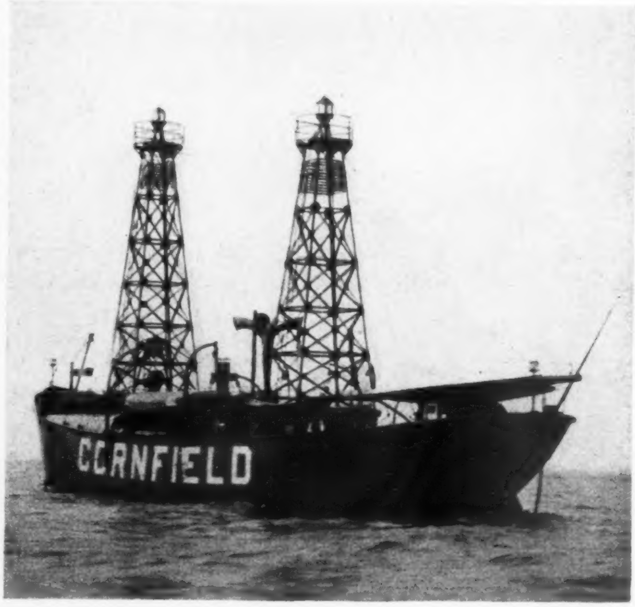
Skate caught by boys in trawl off coast of Maine

Walpole Family in a borrowed fishing dory

gang of bandits escaping with their loot and not at all like a peaceful law-abiding citizen taking his family for a pleasure trip. Again and again he was forced into the gutter by cars roaring past at forty to sixty miles an hour. Cars passed him on blind turns where a smash-up would be inevitable should another car happen to be making a turn in the opposite direction. Occasional wrecked cars being carted to the morgue served as a constant reminder of what can happen to the most careful driver should he have the misfortune to get mixed up with one of these reckless speed maniacs. It seemed to be a matter of life or death with the majority of drivers to get somewhere else in the shortest possible time regardless of consequences. The driver of the car ahead would hold out his left hand and then suddenly dart off to the right. There seemed to be millions of rules for drivers, local and otherwise, and nobody seemed to pay any attention to them except when there was a pretty good chance of being caught. A forced stop to change a tire was a calamity. Did any other motorist show any sympathy or human feeling for the cripple by the roadside? They did not. They tore along as if pursued by the evil one and passed so close to the disabled car that the dismounted driver had to be constantly on the alert to keep from being hit while struggling with the tire.

At the end of the pleasure trip Mr. Walpole's nerves were shattered and his pocket book wrecked. His new car looked ready for the junk shop, and the unanimous opinion of the family was that never again would they hit the open road and spend a vacation out in the great open places where men are men. Even short Sunday and holiday trips became a nerve wracking effort to accomplish a few miles amid the congested traffic always present on these occasions. The only people who got anywhere seemed to be skillful and reckless road hogs. A short trip planned for daylight was usually delayed by traffic conditions so that the finish was in the dark. Then were added to the usual perils the impossibility of reading road signs, the feeling of reckless speed which is always present at night regardless of the actual speed, and the extreme pleasure of facing miles and miles of glaring headlights which make every other object practically invisible. It is at such times that the worthy pedestrian chooses to take a chance and dart madly across the street, and woe betide the tired driver who is unable to stop his car in a fraction of a second. The headlines in the paper will be, "Reckless Driver maims unfortunate Mother of Six," and later on a sympathetic jury will agree on something a bit stronger. If to the darkness you add a downpour of rain and skiddy pavements, the picture of a lost soul making a trip through the lower regions is complete.

The family still had an unsatisfied yearning for the great open spaces, and the following year Mrs. Walpole mildly suggested that there must be much more room on the sea than on the land, and why not have a yacht instead of a car. "In the first place" replied the so-called head of the family who was still supposed to know everything except local traffic rules, "the cost of a yacht is prohibitive. In the second place, nobody but a millionaire could afford to run one. In the third place you have to be born and brought up at sea to get any pleasure out of it or to be able to operate the thing yourself, and in the fourth place I would not be willing to expose my family to the dangers of going out on this dangerous element unless I could afford an experienced crew." "Fiddlesticks," replied Mrs. Walpole. "Do you actually know the cost of a yacht or the cost of running one? I do not, but it seems to me that an ocean liner could be run for less than the cost of our automobile trip last year, and we do not necessarily need an ocean liner. A yacht or motor boat is nothing more or less than a floating automobile with an engine, steering gear and such greasy dodabs. You certainly know how to take care of your automobile engine and steer the car. Why could you not do the same thing on water as on land? As for danger, I do not think anything could ever get on my nerves like the hair breadth escapes we had on our trip last year. Also it must be much better for the kids to breathe the fresh ocean breezes, roam around a boat, fish and swim, than to sit cramped in a car all day long breathing dust and exhaust gas."



M. Rosenfeld

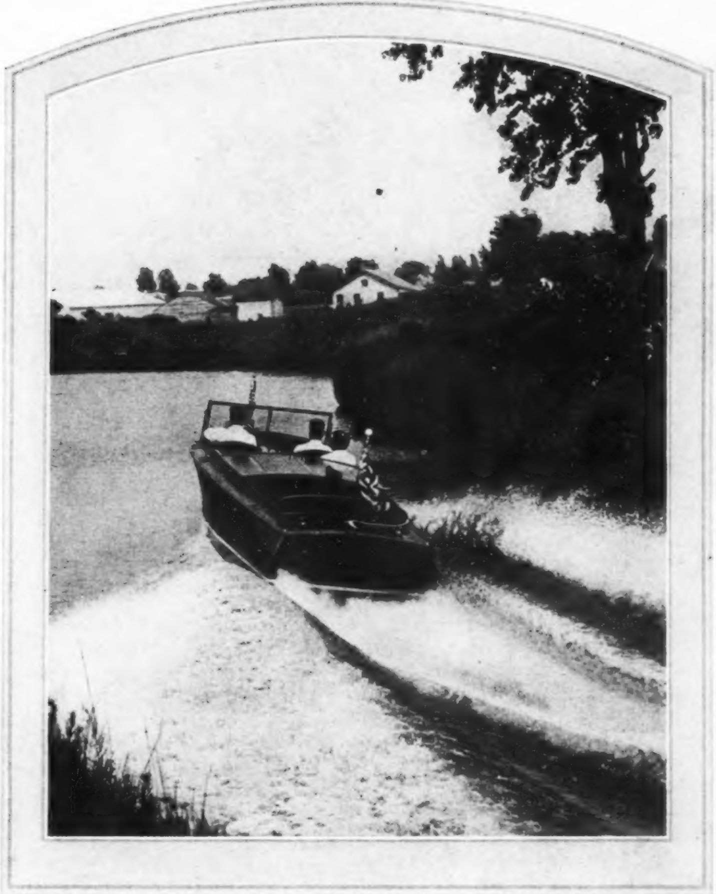
The new Cornfield reef lightship off Long Sand shoal

Most husbands can make ponderous assertions to their wives, but in this case Mr. Walpole knew nothing about boats. He had been simply chucking a bluff, and he realized that he had been making statements to his wife gathered from idle gossip or imagination. Having been married for some years, he knew enough to drop the subject, but he decided then and there that he would gather some real information for a quick come back. He read boating magazines and sent for boat catalogues, he talked to boat owners and even visited a few harbors where real boats could be seen. At some of the harbors he got a whiff of real sea air which made him sit up and take notice. He discovered that the impression that nobody but a millionaire could buy a boat came from the method of designing and building one boat for one customer and then a different boat for another customer. No two boats were alike and each one cost a small fortune. If automobiles were built in this way only a few thousands could be sold instead of many millions. He discovered that nowadays very few boats were built in this manner, that most boats were standardized like automobiles with mass production of each type, giving a far more reliable finished product at a fraction of the cost. Standardized motor boats could be bought for the price of a Ford up, depending on size, speed and equipment. Second hand boats could be bought for 25% to 75% of the original cost, depending on age and condition.

Mr. Walpole was horrified to learn that a boat such as he desired ran from five miles on a gallon of gasoline to five gallons per mile, depending principally on speed and size. This would naturally be a shock to any careful automobilist. On the other hand he found that a motor boat of the cruiser type would be a real home for his family and thus eliminate hotel bills. When he thought of all the hotels he had practically bought and paid for during his last year's automobile trip, a few extra gallons of gasoline per day seemed a negligible detail. Also, Mr. Walpole was interested in pleasure, rest and comfort, rather than in excessive speed, and the slower the boat, the less the cost to purchase and operate. After all, speed is only a matter of habit. In prehistoric times before man had forgotten how to use his hind legs, three miles an hour was considered a fair gait. By means of the noble horse man could cover thirty miles per day. These speeds were considered satisfactory. To-day an aeroplane which cannot make a lot more than a hundred miles an hour is slow. Eventually we may all be able to fly to Europe in five or ten hours, and when we are accustomed to that, some bright nut will figure out some way to eliminate this waste of time and cut the trip down to five or ten minutes. Question, will the man in the fast trans-Atlantic aeroplane be any happier, healthier or live any longer than the man on the horse? In any event, Walpole, for one, was fed up with speed and wanted quiet and comfort. He was told that any man who could drive a car and had the least grain of common sense could easily become a skipper, that unless a man was deliberately foolhardy there was no real danger, and that there were many so called landlubbers now operating boats with the best of them and getting away with it.

Although cautious by nature, Mr. Walpole began to think there might be something after all to this wild idea of his wife's. He went to see a yacht broker, of which there are many in every large city on the coast or on a river. The broker told him he had on hand or would find any type of second hand boat wanted. Mr. Walpole decided that he wanted a boat big enough to accommodate his family with all the comforts of home, a big margin of safety in rough weather, a low purchase price and a low operating cost. It seemed a large order, but the broker thought it easy. Mr. and Mrs. Walpole, accompanied by a yachting friend and the broker, inspected several second-hand boats and finally picked out a motor boat about thirty-five feet long with berths.

(*Continued on page* 154)



A speedy runabout is a convenient way of reaching many remote and picturesque places

M. Rosenfeld

WHY I OWN A RUNABOUT

When a Man Has Been Behind the Wheel of a Fast Runabout He Will Never Be Content Without One

By GORDON P. MANNING

NOT so long ago I was the proud owner of a motor launch. That's what the man I bought it from called it, and I figured that he must know—it being his boat. This was about 1915, if my memory doesn't fail me—and at that time my craft was one of the finest on Lake George. Almost any day during the blistering summer weather I could be seen sporting my craft about the shores of this beautiful lake. I got so much real genuine pleasure out of that first boat—that it was all I could do to leave it after my summer vacation was over.

Just why that motor boat ran without trouble for me over a period of five or six summers, I can't imagine. Surely I didn't have any knowledge of what made it go. All I did was give it gas and oil. I remember the routine for starting her—just as well—one priming load of oil in her pet-cocks—turn her over twice, then one load of gasoline as a chaser in the same pet-cocks—then turn her over once—then turn on the switch and with the second kick over she'd begin to run. Never failed. That is, as long as I did just that. But if I presumed to administer gasoline first, for instance, then oil—she would cough and sputter and just plain act mean.

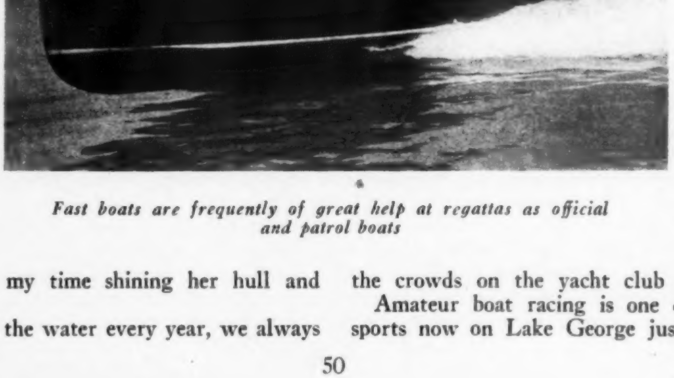
But that's the way I fell in with motor boats, and up to this day I've never been able to be without one. When I think of the grief that I went through on those hot steaming days over the old flywheel, and how I could have avoided all the unpleasant part of motor boating by just delaying my introduction for a few years, I sometimes cringe with agony. Because along about 1920 the motor boat manufacturers sorted themselves out and got organized and decided to do things the way the automobile men were doing them. Right at that point the pleasure of owning a motor boat mounted, increased and doubled. The unpleas-

Impromptu races among proud owners of this type of craft are frequent and furnish extra thrills

ant and obnoxious tasks connected with spending a quiet Sunday afternoon on the water were gradually diminished until now when I step in my mahogany runabout I'm rather ashamed that I have to have so much done for me.

And yet I rather like it!

I still go back to Lake George, and that is where I keep my little mahogany beauty now. Every spring when I go back I know she'll be waiting right where I left her in the Fall, all ready for me to put her in the water and give her a couple of coats of varnish perhaps, if I feel ambitious. I get into my old clothes and for a day or two I have the finest time imaginable just varnishing and polishing up the old boat. She's not so old either, two years, and I've done all the work on her myself! Never have had any engine trouble though, much to my regret. I became such a good engineer on my old one-cylinder speedster that I really was looking forward to an occasional dabble in the grease of my new outfit. But so far I haven't even had to change a spark plug, although I will admit that I've had them out several times to see if they were ready to be changed yet. But I listen for sounds, ominous sounds which shouldn't be in her when she's running. Listen as much as I will, I can't find anything though which is worth while fixing, and so there you are. Now I spend my time shining her hull and nickel.



Fast boats are frequently of great help at regattas as official and patrol boats

When I get her in the water every year, we always have a party. Several of our friends living in cottages nearby bring loads of food and drinks and we start out early in the day to explore the lake again. We always have to make a complete circuit of this 40-mile pond just to see what's happened during our absence, and what's new. We have a favorite island where we always stop for lunch, and just a step away is Paradise Bay. Ask any one who's ever been to Lake George if Paradise Bay isn't the most beautiful spot in the world, and you'll get a very emphatic, yes. And we just have to nose in there under half-speed so as not to disturb a thing. Sometimes we catch a fleeting glimpse of a deer, startled, running back into the brush, with his white tail bobbing. Or sometimes it's a woodchuck or rabbit that leaves suddenly when we come. But that day of all the year stands out with us because we feel so much like explorers, pirates who are venturing abroad to discover hidden treasure.

Later on during the summer I become something of a race driver. I never was such until I bought my present boat, but they make it so easy to go out and win cups, why should I stay at home on Saturday afternoons, waiting for the evening dance? Now I'm known as "The Ball of Fire" around our end of the lake, and when I get my little boat stripped for action and get into a snappy racing driver's uniform, the crowds on the yacht club steps gasp.

Amateur boat racing is one of the most popular sports now on Lake George just because there have been so many of the stock runabouts sold there. Wherever three or four of these boats are sold, the owners are always getting up races of one sort or another. It got so that last summer one or another of our crowd was always wanting to stage a race. Always the ones who had been beaten the day before, I noticed. They'd meet on the hotel porch and challenge each other to a race. A crowd would gather, and nothing would do until they went out, got their boats and dashed around the course a few times, — I've seen them do it at midnight under a full moon. Just big boys, that's all!

A load of ten or more happy individuals is no burden at all for the modern runabout

The kiddies love to aquaplane perhaps a little more than I do myself, but ever since I took to wearing a life preserver I don't mind so much getting thrown into the water. Once I remember, some wise crackers made me swim to shore, perhaps a quarter of a mile, after I'd fallen off. But now I operate the boat and almost every afternoon there is a crowd to go out and get a good ducking. I have my own board which I built according to some ideas I had on the subject, and she is surely a thrill-giver. I've given more people thrills on that aquaplane than you can shake a stick at. It is so arranged that when I pull the rope, the board misbehaves, and makes the rider feel all at sea. Of course there's no danger in falling off at 30 miles an hour, all you get is a little ducking and when you come up, you see the boat perhaps half a mile ahead, or so it seems anyway.

A lot of people like to fish. I don't. Some folks are perfectly content to sit in a boat all day long and never get a nibble. I have a cousin who is like that, and when he'd come up to visit us, I used to endure agonies with him, waiting for the fish to bite. It got so that every time we went out on the Lake, Charlie would say, "Well, let's take along some tackle, we might want to stop and catch a few." Oh, how he could continue to think he was going to catch a few is more than I can figure out, because he never caught a thing other than one six-inch perch during all the six years he'd been coming up there. But I in my kind-hearted way, used to go out and broil in the motionless boat while the fish swam around comfortably below the surface. At last, however, I solved this problem, and I present it to any of you motor boatmen who have friends that want to use your boat to fish from. I got an old dory, relic of 1868 or thereabouts, and hitched it astern one day as we left at daybreak for the fishing grounds. Charlie, oddly enough didn't see it, as he was grooming his gear. Honestly, that man had more equipment and caught less fish than—well, that's another story. But when we had gone the fifteen miles down the lake to the fishing grounds, I sprang my surprise on him. Can you imagine the chagrin and shame on his face as I pulled proudly away and left him sitting in the old row boat? I called out cheerily that I'd be back at sundown for him! And do you know ever since that day Charlie hasn't cared so much about fishing? All of which leads me to believe, indirectly, that what he really wanted was to be out in my Chris-Craft and not fishing, at all!

I could go on and tell you a really good fish story of how we did catch the prize of the lake one year. But we didn't use elaborate tackle and lines to do it. Just a paddle, that was all.

It happened that we were crossing the lake one night to go to a dance and when we got right out in the middle, it was moonlight and the water was just as clear and light as day, we saw the biggest splash just ahead of us that you've ever seen. A fish we all thought, and as we went by one of the boys happened to look overboard. There was the fish lying just under the surface, and a big one too, perhaps 30 inches long and weighing about 14 pounds. "Stop her, stop her," he cried and for no good reason I let out the clutch and pushed her into reverse. And as we backed up I saw Fred crouching in the stern with a paddle in his hand peering into the water, all of a sudden he raised that paddle and with a terrific smack brought it down upon something which was moving just below the surface. O, what a wallop! It broke the paddle in two pieces, but do you know there came to the surface right beside it, something that looked awfully much like a fish. Fred hooked onto it and after he pulled out that sparkling lake trout weighing easily 15 pounds our jaws just dropped. Incidentally, it may interest you to know that Charles was also in the boat at the time, refusing to give this type of fishing any attention. But when he saw this fish, over 15 pounds, heavier than anything he'd ever caught, he was indeed a contrite fellow. I think he was ashamed, also. And that is the story of how we made the summer's record catch from our Chris-Craft. You should see the people who go out now on moonlight nights looking for the big ones! We cannot understand why this fish was resting in the position that he was, and our only conclusion is that he was just tired and stopped for a moment. Helen says maybe he was moonstruck, and it had gone to his head. But we really have no proof of that.

It seems as though I could go on forever telling about the things that we do in our motor boat. The fact of the matter is that we have come to count on our runabout in the sum- (*Continued on page* 154)

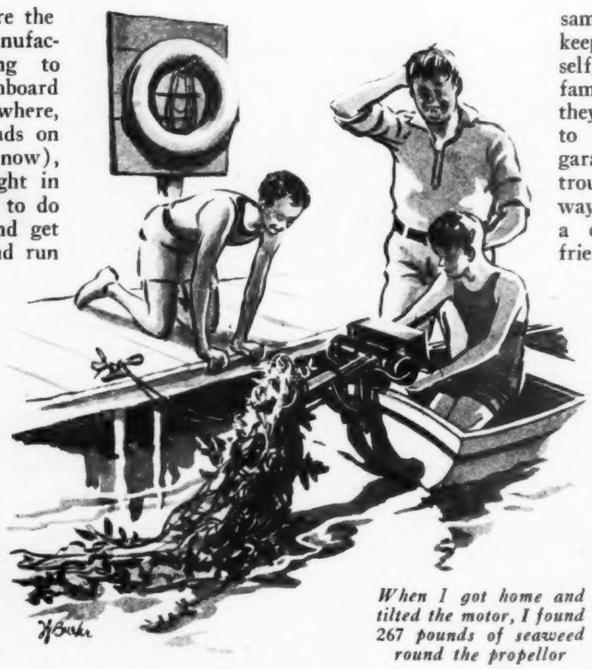
THAT DEEP SEA MOTOR

Intimate Experiences With Outboard Motors Suggest Possible Improvements Which Are Respectfully Referred to the Manufacturers

By DOUGLAS MALLOCH

Author of Come on Home, The Heart Content, Little Hop-Skipper, In Forest Land, etc.

Illustrations by Walter Buehr



When I got home and tilted the motor, I found 267 pounds of seaweed round the propellor

WELL, I see where the automobile manufacturers are going to put a do-dad on the dashboard (although I don't see where, there are so many do-dads on the instrument board now), and, when you get caught in traffic, all you will have to do is to turn the do-dad and get a jazz program—that and run for your life. Because, if all the cars in the United States are put end to end, as they will be every Sunday, and then some fellow, who is probably tired of life anyway, starts to cut around somebody, and all these cars are stalled while the county police take up a collection for the widow (the collection being her late husband) and then all the cars, in order to pass the time away, tune in and get various stations, won't it be perfectly grand? Personally we believe it is going to lead to a lot of shooting on our public highways, of which there is altogether too much now. One thing is sure, as far as America is concerned: it is going to make Europe know for certain something about us that now it only suspects.

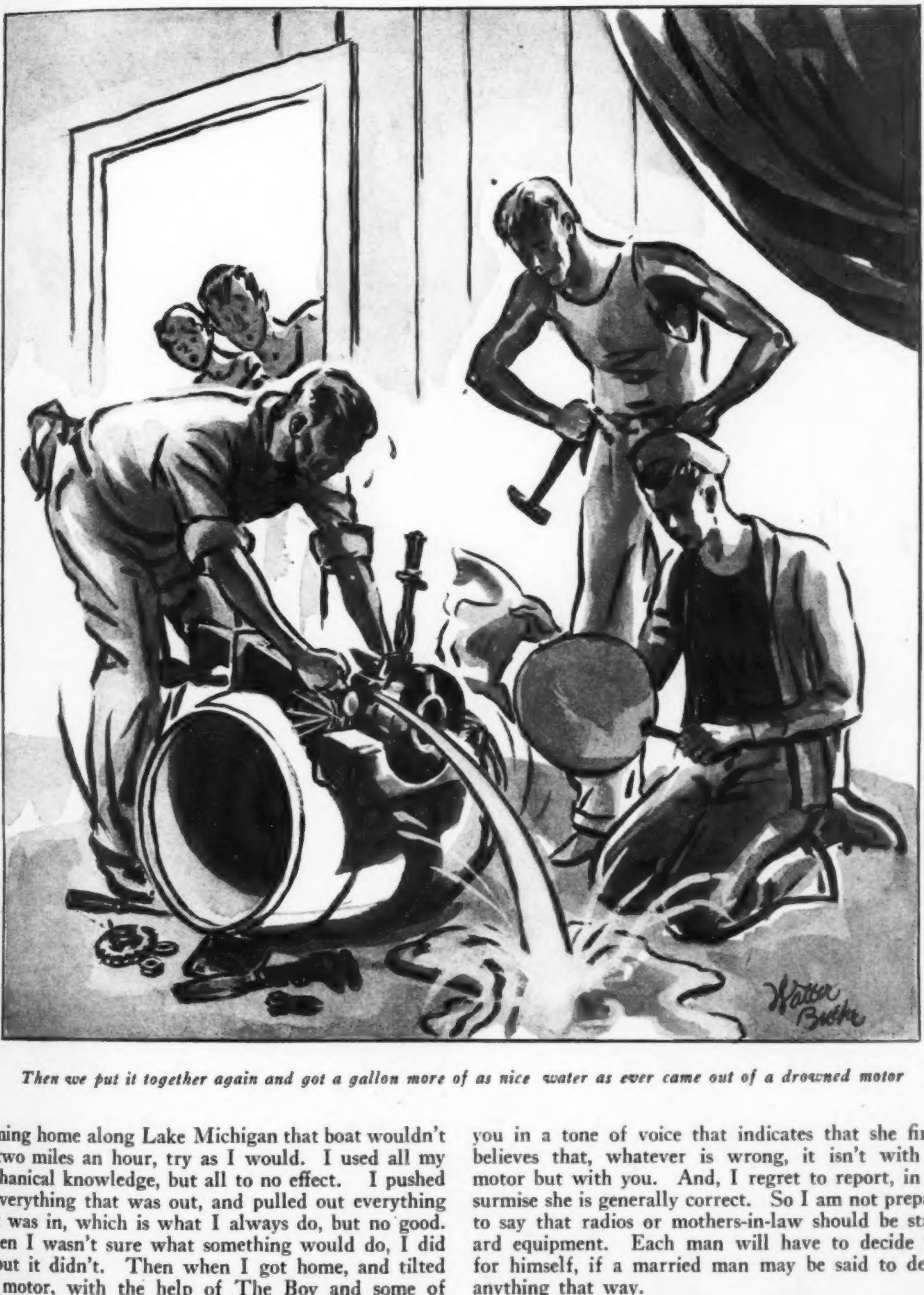
We live in a great age, but not to one. Everything is being improved, except us. Everything has something on it to push in, or pull out, or to leave alone. We saw an automobile the other day that had twenty-seven attachments on it, not counting the sheriff's. All of the four-cylinder cars are being changed to sixes and eights, to haul the accessories. Many a car, for example, has two horns on it; which seems appropriate, because it goes like the devil. You can look at a gauge and tell when you are just about out of gas, and so you never buy any until you just about are. And so it goes. We even have iceless refrigerators in which we make ice; and some people even make what they put the ice in.

I do not speak of these things in a spirit of carking criticism, as I do not know what carking means, and I couldn't cark if I wanted to. I am as heartily in favor of progress as the fellow two blocks back in the line of cars to which I have referred in the prologue. If a man wants to buy a car with twenty-seven accessories, that is his business, just the same as it is his business if he wants to marry a widow with the same number of children. I keep a couple of cars myself, and I believe every family should have two, so they will always have one to haul the other to the garage. There is only one trouble about it. I am always afraid they will have a collision, and that my friend Jim Kemper, the insurance man, will pay me, and then sue me. Two cars is little enough for the ordinary family, and none at all for Dad. When I want to go anywhere, if by land I walk, and if by sea I outboard.

And that reminds me of what I started to talk about in the first place. My complaint is not that there are too many improvements on the automobile or the ice-box, but that there are not enough on the outboard motor. This will probably astonish the outboard motor manufacturers, whose motors each year are as far ahead of last year's as last year's were ahead of the year's before. They have made marvelous progress. They have practically eliminated noise, smoke, vibration and the boat. The time was when a motor was something that you hung on a boat. Now a boat is something you shove in under a motor. And that is all to the good. It has increased our speed and our cruising radius. When I first became interested in outboard motors they were something to go out and pick pond-lilies with. Now they are something with which to go for the doctor. Once they were collectors of seaweed, now they are collectors of cups.

I am not longing for the good old days, not by any means. I am not considering trading the car for a horse, and I don't think the man with the horse, after he had seen this particular car, would consider it, either. I had to take care of a horse in youth, and personally I would rather wash a car. Likewise, as far as outboard motors are concerned, I would sooner go after records than pond-lilies. But the beauty of it is, if you want to go after pond-lilies you can still do so. The up-to-date outboard is all that is and all that it was.

One of the very first mechanical problems I ever had to face with an outboard motor had to do with one of these pond-lily expeditions on Mona Lake.



Then we put it together again and got a gallon more of as nice water as ever came out of a drowned motor

Coming home along Lake Michigan that boat wouldn't do two miles an hour, try as I would. I used all my mechanical knowledge, but all to no effect. I pushed in everything that was out, and pulled out everything that was in, which is what I always do, but no good. When I wasn't sure what something would do, I did it, but it didn't. Then when I got home, and tilted the motor, with the help of The Boy and some of the neighbors, I found 267 pounds of seaweed wound around the propellor. That is how I learned that you can't run a boat with a ball of yarn.

The modern outboard motor is a marvelous piece of mechanism, but I can think of a lot of things that the manufacturers could do that they have never thought of, and probably wouldn't if they did. I don't mean radios on the dashboard. If a man wants to take along a radio, that is a thing for every man to decide for himself, like taking along his mother-in-law. When something goes wrong, she always asks you what it is, when you wish to heaven you knew. And she asks you in a tone of voice that indicates that she firmly believes that, whatever is wrong, it isn't with the motor but with you. And, I regret to report, in this surmise she is generally correct. So I am not prepared to say that radios or mothers-in-law should be standard equipment. Each man will have to decide that for himself, if a married man may be said to decide anything that way.

But about the first improvement that I would suggest to the manufacturers is a motor that would float. If it is practical to make an outboard motor out of cork, then it should be done. Or some light wood. Why not? Other things are made out of wood, and so why not outboard motors? Edison experimented with six thousand substances before he hit on the right thing for the electric light. So it would seem that the outboard motor manufacturers are holding out on us. There must be at least 5,999 materials they haven't tried yet. But they have gone right on making motors that, when cast upon the waters, show no tendency to return. Even a crumb will do that, and yet they probably haven't even tried crumbs. In consequence, motors have a sinking spell the minute they strike the lake, ocean, river or whatever it happens to be. I only wish that a congressional investigation could get to the bottom of things as quickly as an outboard motor. It goes down like your pet stock.

You may not know that, because you may not have experienced it, but I speak with the authority of one who has. You may not believe, gentle reader, that an outboard motor, if thrown overboard, will go in some other direction than up. I do not say that it will if it falls overboard. I do not know. But I do know that it will if thrown. I tried it, and have eye witnesses. Of course the throwing of the motor overboard was accidental rather than intentional, but the results were about the same. I did not do it for the purpose of collecting scientific data on the subject, but nevertheless it worked.

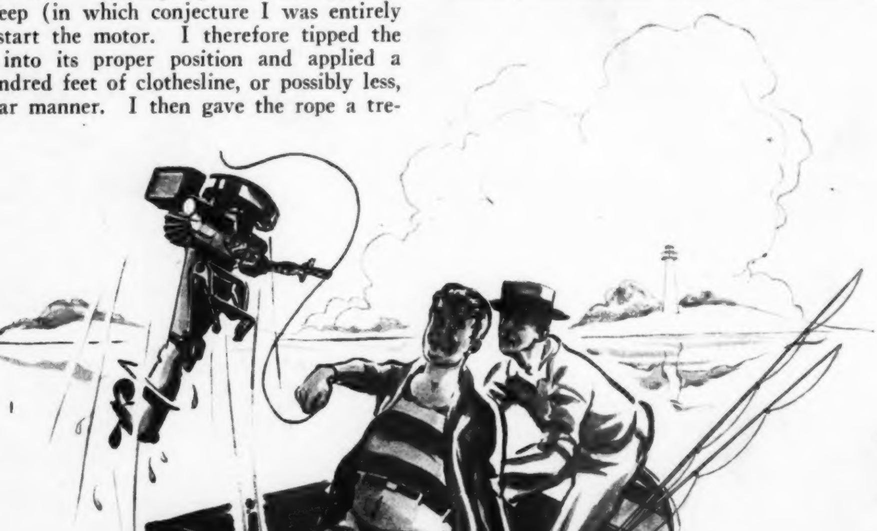
You see, it was like this. I invited my friend Joe Skinner to go out with me for a ride on the broad, but heaving, bosom of Lake Michigan. Lake Michigan is only a lake, but it has ocean ideas. On this day it was not what you would call rough, but neither was it exactly genteel. But I invited Joe to go along. It certainly would be very selfish for anyone to go out riding alone. Always invite a friend to go. It shows a kindly spirt, and also there may be more or less rowing to do, and you will be busy with the motor. How busy you may not even guess.

After Joe had done enough dozens to last him for several days, I told him to desist. We were then somewhere between one hundred and one thousand yards from shore. I did not know the exact distance, as I discovered later. But anyway the water appeared sufficiently deep (in which conjecture I was entirely correct) to start the motor. I therefore tipped the motor back into its proper position and applied a couple of hundred feet of clothesline, or possibly less, in the familiar manner. I then gave the rope a tremendous yank. The motor started at once. I am not just sure where it started for, whether Chicago or Milwaukee, but there is no doubt it started. It described a beautiful arc. I also began describing things, but a beautiful arc was not among them. Anyway, the motor cleared Joe and landed in the lake.

The motor almost immediately submerged. It was then that I realized this serious defect in outboard motors to which I have referred. I saw at once that the motor was missing. I knew there was a chapter on that subject in the instruction book, but none of the things there recommended seemed likely to be of service in this case. Without a gasp or gurgle the motor had gone down with all hands. But my presence of mind did not desert me, even if my motor did. I yelled to Joe to turn around, to stay where we were, to back up, to go ahead, and not to move. All of which he did. Then I gazed into the wavy waters, with about as much success as looking for a number in a telephone directory. The deep refused to give up its secret.

There was only one thing to do, and not even that. But I did it. I shinned over the side. The water was only up to my chin and only down to zero. I began to feel on the bottom of the lake for that motor, to feel with my feet, which seemed to be about the only part of me that was functioning intelligently anyway. Now Lake Michigan, I might say, is rather a large lake. If you will look at a map of the lake you will observe that it extends from one end to the other, and the width is clear across. It may be nice to swim in, but it is no place to take a walk in the early autumn. But the motor was not to be found. At least I was not to find it.

I told Joe to take our bearings. (*Continued on page* 154)



The motor started at once. I am not just sure where it started for, but there is no doubt it started

Photographs by M. Rosenfeld

Sayonara, a 66-foot auxiliary schooner owned by Vernon F. West, and equipped with an auxiliary diesel engine

ALL ABOUT AUXILIARIES

Pertinent Facts Concerning Sailing Craft With Motive Power and the Joys of Handling a Boat With Nature's Forces

By HOTSPUR

THE fearless Editor of MoToR BoatinG, ever on the search for authentic data, cornered me the other day and asked me to write something about auxiliary sailboats. With alarming honesty I told him that what I know about auxiliaries (and more) I have already written—not once but a dozen times. He informed me that thousands of new customers took up the sport of motor boating last year, and that they are no less entitled to hear some drivel about—that is, to learn about—auxiliaries than those who took it up year before last. Whereupon I asked the Editor if I might be permitted to divert these recent motor boatmen from their folly by telling them about the higher sport of sailing and he said he doubted my ability to pull the wool over their eyes. With this explanation of the case I begin.

Last summer all of you recent devotees of the sport of motor boating noticed one thing in particular, namely, that whenever you wanted to use your boat the wind blew like the very devil. I saw you out there in the thick of it, rolling and wallowing, and hanging on to your awning stanchions to keep from being tossed overboard. Your windshield was wet with salt spray and to see where you were going (which was mostly up and down) you had to peer around the glass and take the wet in the eye. You weren't entirely wet and you couldn't keep entirely dry, and you looked and felt decidedly miserable. Every time your bow pounded into a hole you doubted if it would come up again, and whenever your stern rose you thought the racing propeller would yank your keel out. The last time I saw you, you had turned tail to the muck and were running back to port.

I wonder if you noticed me that day. I was the bird in the little green cutter, one reef rolled down and the jib stowed and riding as pretty as a Portuguese man-o'-war in the Gulf Stream. I was dripping wet from head to foot (that came from sitting

Mary Ann, an auxiliary yawl of small but able type

on the bowsprit to stow the jib) and I wasn't wasting any nervous energy trying to dodge the spray. I was heeled over to what may have seemed to you a dangerous angle, but I wasn't bobbing up and down. I had a destination in mind and I was going there, riding the waves, sinking softly into the hollows, and making knots. Yep, that was me, sailing.

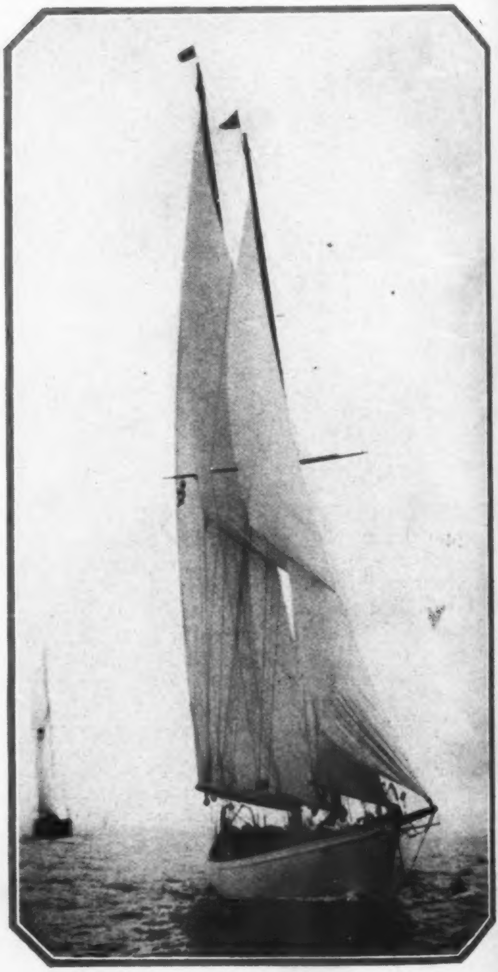
You may recall that when you got back to port you wrote a letter to your Congressman pointing out that there was no fun operating a motor boat in a high sea, and asking him to pass a law prohibiting the wind from blowing on Sundays and holidays. (Your friends needn't laugh at this revelation. There've been a lot of funnier laws passed recently.) Your request was handed over to the Senate which appointed a commission to study your grievance, and along about election time you'll get first rate action. In the meanwhile the wind continues to blow when you don't want it. Well, it was extremely shortsighted of you to attempt to remedy such matters by Congressional interference. If the Congress really becomes aware that we have an ocean surrounding our shores there's no telling what prohibitory legislation it may aim at us poor sailors. Your best way out is an auxiliary.

PROFANITY EASILY LEARNED

There is a certain little thing that may have prejudiced you against windjammers. As you speeded at fifteen or fifty miles an hour around crowded anchorages, you may have come to the conclusion that sail-boat sailors are a profane crew. Well, they are, given sufficient provocation. But there is nothing high-hat about their profanity. It is all simple, elementary, and contagious. If you will swap your motor boat for a sailboat you will learn the language in one easy lesson.

I call to mind an experience I once had in this connection. A friend of mine who had been born and bred a motor boatman had always kept away from sailors because of their swearing. Only by telling him that I was half a motor boatman could I induce him to go sailing with me. We started out in the narrow, western part of Long Island Sound, and were fanning along leisurely and delightfully near Execution, quaffing milk and munching sweet crackers. I recall that I was thanking God that it was still possible to move over the surface of the earth at something less than a hundred miles an hour while my friend, on the contrary, was asking me how I could put up wth anything so deadly dull.

Then the four o'clock whistle blew down in Wall Street, and all the High-Powered Executives who live along the shores of the Sound tumbled into taxies and drove like mad to East Twenty-Sixth street and went aboard their express commuters. Fifteen minutes later the first of them skidded around Throggs Neck, rocked old Stepping Stones to its



Quicksilver II, a 65-foot auxiliary schooner which carries a powerful gasoline engine. She is owned by Albert E. Pierce foundations as she tore by and swept toward us at 42 miles an hour (advertised speed 48).

"Here comes one of them," said my motor boat friend. "And how! Look how she rides. See her throw her bow up and see how dry she is. Marvelous. Grand. How you can be happy drifting around in a tub like this is more than I can savvy."

By the time my friend had said that the commuter was upon us. Her captain was an old hand at the game and he didn't quite cut us down. He only took off a foot of the boom which happened to be sticking in his way. I had had enough experience on the Sound to know what to expect, and while my friend was expatiating on the beauty of the commuter I had passed the end of a line around his waist and battened down the hatches. So when the tidal wave engulfed us I was ready for it, and, in accordance with my custom, I thrust one hand out of water and waved good naturedly.

"Jolly boating weather," I gurgled to the owner of the commuter. As I came up for air I saw him wave back with equal camaraderie. But the language my motor boating friend used—spontaneously and without conscious effort! I held my hands over my ears.

Then along came the next commuter, going 48 miles an hour (advertised 54) and intent on overtaking the first one and giving it the merry haha. They didn't see us at all, and I felt mighty lucky that they only took off our bowsprit and didn't injure the planking.

Kolenia, owned by Arthur P. Hatch, is a neat little auxiliary sloop

Hotspur, an able 33-foot auxiliary cutter which competed in several long distance events last year

"Cheerio!" I called, but I was the least little bit annoyed and I added, "See you in hell." There was no answer to this as the commuter was already out of earshot. Luckily, because my motor boat friend had tapped a rich new vein of profanity hot enough to melt the fusible plugs of the fire extinguisher.

"Well," said I, "let's have another shot of milk," and I looked around for the bottle and glasses. They were gone, washed overboard with the dinghy, spinnaker pole, anchors, and forty fathom of manila cable. "No matter," said I. "It's all part of a day's fun."

Then we looked back and saw the third commuter coming our way. The owner of that was a gentleman and from the way he was heading I could see that he intended to give us full sea room—at least twenty feet. It was unfortunate, therefore, that before he got to us he struck a submerged log. In our crippled conditon with the forestay tangled up with the shrouds and the leach of the mainsail torn and wrinkled we couldn't sail over to the rescue. But I got the auxiliary motor going and in a few minutes we were picking the survivors out of the water. While this was happening six other high-speed

(*Continued on page* 156)

Coronet, a clipper bowed diesel yacht of large size owned by Irving T. Bush of New York

Photographs by E. Levick, Inc.

THROUGH SPRAY TO BUSINESS

The Happy Solution to the Commuting Problem Found by Many Prominent Citizens in Their Daily Journeys

By GEORGE W. SUTTON, Jr.

TALK about high speed commuting! Gee whiz! Suppose a man of means lives in Port Washington, L. I.—as many men of means do. Suppose he becomes a member of this new club up the Hudson which is turning J. P. Morgan's estate into a meeting place for sportmen of all tastes and both sexes. Suppose he is the president of a bank down in Wall Street! Well, what of it?

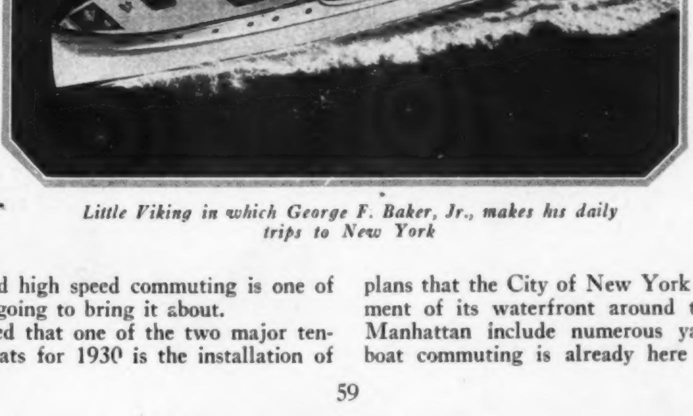
Just this. He gets in his high-speed commuting boat at Port Washington around 8 o'clock in the morning, and is carried as fast as a thousand horsepower can carry him to the New York landing station of the Montauk Yacht Club at 52nd Street, or the New York Yacht Club at East 26th Street. There his car or a taxi meets him and carries him to the marts of trade. Whereupon, contrary to the usual custom, his captain, instead of tying up at the dock for the day, turns the prow of his commuter up the Sound, not for Port Washington but for the Indian Harbor Yacht Club at Greenwich.

The day's work accomplished at four, four-thirty or five, Mr. Quick Commuting Banker crawls out of Wall Street in a taxicab—the only slow part of the trip—over to Chambers Street or other handy waterside spot, maybe the Battery. Here he boards a high-speed motor boat runabout and, possibly with two or three other convivial bank presidents and such, is whisked up to West 79th Street, or 86th Street. Here, without going near the shore, he and his pals are transferred to a sleek seaplane which, a few minutes later, roars into the air and, in an incredibly short time, lands him 50 miles up the Hudson at the new club. Nine holes of golf, a change into evening clothes, a couple of shots with the boys and he is off again in the

The commuter yacht landing of the New York Yacht Club at 23rd Street and the East River

seaplane across New York and part of Connecticut, landing in the harbor of Greenwich by daylight in plenty of time to join his family and friends at dinner around the hospitable board of the Indian Harbor Yacht Club. Late that evening—back to Port Washington in the commuter.

Is this all a pipe dream? Not a bit of it. Such things are being done now by sportsmen all over the country and it is possible that this very program will be one of the things that can be done during the coming season. We think we are living a fast life and that we have led it for a number of years. We don't know the half of it. The speed of living developed within the next few seasons is going to be astonishing. It wil allow us to almost double our present activity. Whether that will be a good thing or not is something for philosophers to mumble about in corners. Anyway, we are going to have it and high speed commuting is one of the things that are going to bring it about.



Little Viking in which George F. Baker, Jr., makes his daily trips to New York

Have you observed that one of the two major tendencies in motor boats for 1930 is the installation of twin screw equipment in family cruisers and express cruisers? Why? Why, do you suppose, is Dodge coming out with a 45-foot, 35-mile twin screw cruiser? Why is Chris Smith introducing a 48-footer with two powerful engines? Why are Hacker, Luders, Consolidated, Matthews and a flock of others doing the same thing? Speed! Speed!! Speed!!!

Of course, motor boat commuting will always be the privilege of a selected few among our numerous population. It is not a sport for the many. But our definition of the word "few" must change in this connection from year to year. It is possible that the number of wealthy men who will commute by motor boat this year will double that of last year and that 1931 will see a similar increase in this activity. The new and swanky apartment houses that are going up along the East River are laid out with landing stations for motor boats. The plans that the City of New York has for the development of its waterfront around the entire Island of Manhattan include numerous yacht basins. Motor boat commuting is already here as a big, practical,

Corisande, a fifty foot Gar Wood flyer in which Marshall Field makes a quick trip to New York from his Long Island home

The home of George M. Pynchon at Greenwich, Conn., from which he starts his daily commuting trip by water

Gem, a speedy ferry boat used by Wm. Ziegler, Jr., between his Connecticut home and the city

enjoyable mode of transportation. Its growth during the next few years is inevitable.

While all these new high-speed cruisers are contributing to the greater speed of life and the widening of our social horizons, they are providing a repose that does much to offset the hectivity of our other recreations and our other modes of transportation. The deck of a fast moving motor boat, dashing through the sunlit air, becomes a personal sanitorium in which health pours into the body and into the mind. It presents the perfect escape from the telephone, from the unexpected and unwelcome office and home-caller, from high pressure salesmanship and all the other brain fagging little problems that beset us ashore. It is Nepenthe in the midst of bedlam. It allows us to catch up with ourselves in the mad race for—well, what the heck are we chasing, anyway? Whatever it is, the high speed motor boat helps us in catching it and escaping it at the same time, if you know what I mean. I'm not sure that I do.

One night last summer I was going through Hell Gate in a big cruiser about midnight, bound up the Sound for a week-end, with a congenial gang, mob, or whatever you call a crowd of respectable young people bent on pleasure. In the wildest part of that wild bit of water a speed boat passed us like a bullet.

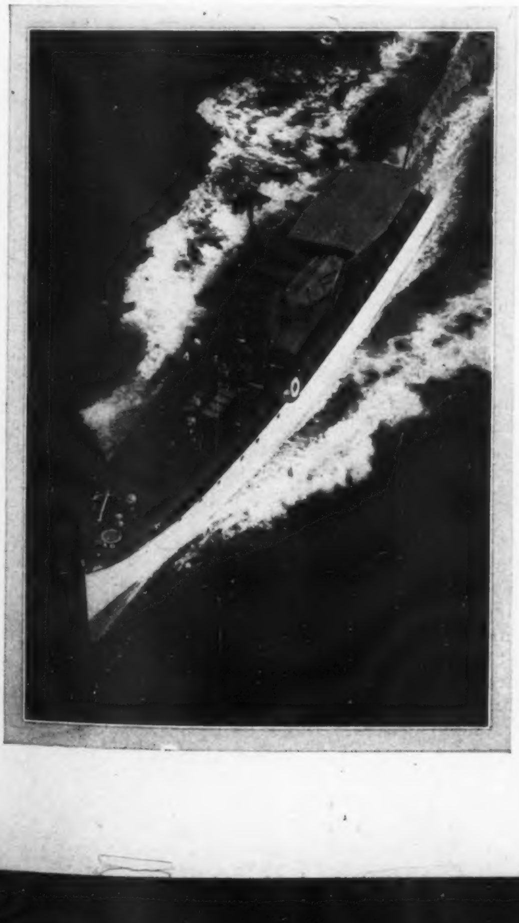
"Rum-runner?" I queried.

"No," replied my host, the owner of the cruiser.

Walter F. Chrysler's home and private landing stage from which he starts his daily trips to New York

Frolic III, the speedy 75 foot commuter which Mr. Chrysler uses to save time an! energy

An attractive view of Tuna, Mrs. John T. Pratt's fast 70 foot commuter



"That's Will Mahoney, the funniest man on the Broadway stage, commuting from business."

And sure enough, I found that all summer Will Mahoney had commuted back and forth between his Long Island home and his theatrical labors in a Dodge runabout. When you get them commuting by motor boat in the middle of the night, you've got something.

Motor boat commuting will no more take the place of train and automobile commuting than will the motor boat take the place of either of these modes of transportation for other purposes. But for those who can afford it—and there are many more of these than we suspect—it is a safe, practical, pleasant substitute for the dangers, inconveniences and other sorry features of land commuting. Already the number of motor boat commuters is up in the hundreds. Within our generation it may go up into the thousands. After all, the commuting craft is a real utility boat, practical not only for going to business but for a thousand other purposes as well. In fact, it is the real social medium of the motor boat world, even more social than the family cruiser which is more sociological in the activities it produces.

High-speed, high-cost commuting boats have become a standardized product. Nothing could tell the story of commuting better than that. You don't build a standardized boat for a few discriminating individuals to use. You build it to meet a widespread demand.

A 40-foot Fleetwing double cabin cruiser with many excellent features

YACHTS OF MODERATE SIZE

Achievements of Science and Artistry Introduce in Smaller Craft All Possible Comfort, Convenience and Safety

By FRANK PEMBROKE HUCKINS

IN this era of conservative buyers, the moderate size yacht is of particular interest. By moderate size is meant the craft from forty to sixty feet in length.

While the mansion of fifty rooms must perforce be more luxurious than the penthouse apartment, and the magnificent craft of a hundred and fifty or more feet the last word in naval architecture, the hand of the engineer joined with that of the artist have made as great strides in perfecting the smaller yacht as they have in the smaller home.

Hence many a man who can easily afford the sumptuous estate and the imposing yacht finds himself very content with both a more compact home and a more compact yacht.

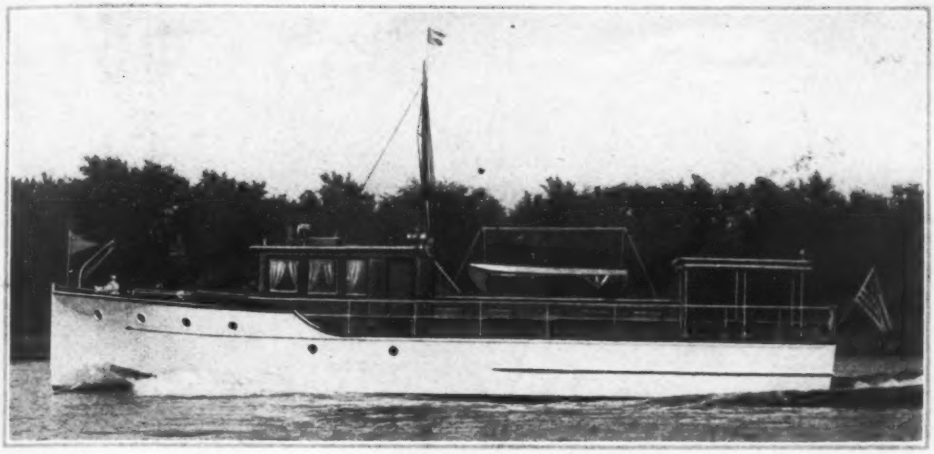
It has been repeatedly demonstrated that mere SIZE of a craft does not determine her seaworthiness. Daring men have crossed the Atlantic in the tiniest of boats, life boats from great ships once launched invariably ride out the worst seas, and an army of fishermen are constantly at sea in small craft in all kinds of weather.

Seaworthiness is something that is inherent in the boat herself, or lacking, depending on the design of the particular hull. Since the standardized yacht has materialized, it has been financially expedient to impinge a far greater research on matters of seaworthiness, strength and safety than was ever possible in the creation of the individual boat. That there is not a single make of standardized cruiser afloat today that is not thoroughly seaworthy is an absolutely safe statement. Despite the hundreds of thousands of miles of annual travel that these craft make, oftentimes in the hands of careless and inexperienced men, and despite their being too frequently run ashore by the latter variety of navigator, you never hear of disaster to the human cargo.

Similarly, fire or explosion is practically unheard of in the modern standardized moderate size yacht. If the reader would make as careful a study of this subject as this writer, he would find that the very infrequent fires occur almost exclusively in odd craft, built in some small yard where careless and deficient installation lay the foundation for future woe. For that matter, fires in boats are so rare, that when they do happen, it is real news and the papers spread it all over their front pages, and while that fire is occurring five hundred people get mashed up in automobiles.

Segregation of tanks, bulkheading, better motor installations have so reduced the fire hazard in the moderate size yacht that you are very much safer aboard one of these modern craft than in crossing the downtown street or driving your motor car, but of course neither science nor caution can prevent some people from examining the inside of their tanks with a lighted match and they will continue to blow far and wide, to the consternation of mankind.

Even ten years ago, the small yacht was much of a nightmare. You had to go out in the rain to get from cabin to stateroom. Tenuous windshields had grown up to keep the waves directly off your face, but the deckhouse was almost unknown. The few in evidence were very much in evidence, being perched up like a sore thumb where the unhappy occupants would feel



A roomy 55-foot twin motored Vinyard cruising yacht

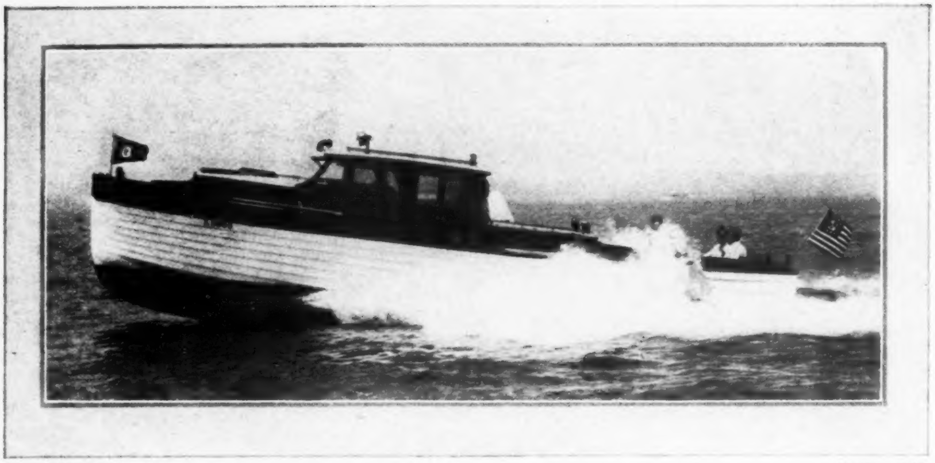
every roll the boat made.

Now we find a gradual similarity of style wherein a deckhouse is almost invariably found nearly in the middle of the craft, whence access is obtained to all parts of the ship without leaving shelter, whence she may be conned in comfort and with maximum vision. Deckhouses tend to become larger, to blend more gracefully with the hull and to create a veritable living room where before there was but bleak deck.

Below, individual taste and ideas continue to run the whole gamut from galleys in the bow to galleys in the stern and

Another twin engined cruiser, the 45-foot Dachel-Carter

A congenial company in the forward cockpit of a Fairform Flyer



M. Rosenfeld

The Wheeler 35-foot twin screw speed cruiser is good for 32 miles per hour

yachtsmen wax violent over the merits of various arrangements. Suffice it to say that however the modern yacht of moderate length is laid out, that they all offer a degree of comfort that is little short of amazing. Privacy has been worked into the layout such that two couples may engage in long cruises and come back not only on speaking terms but invigorated in mind and body and with a greater wealth of experience to bind them in their friendship.

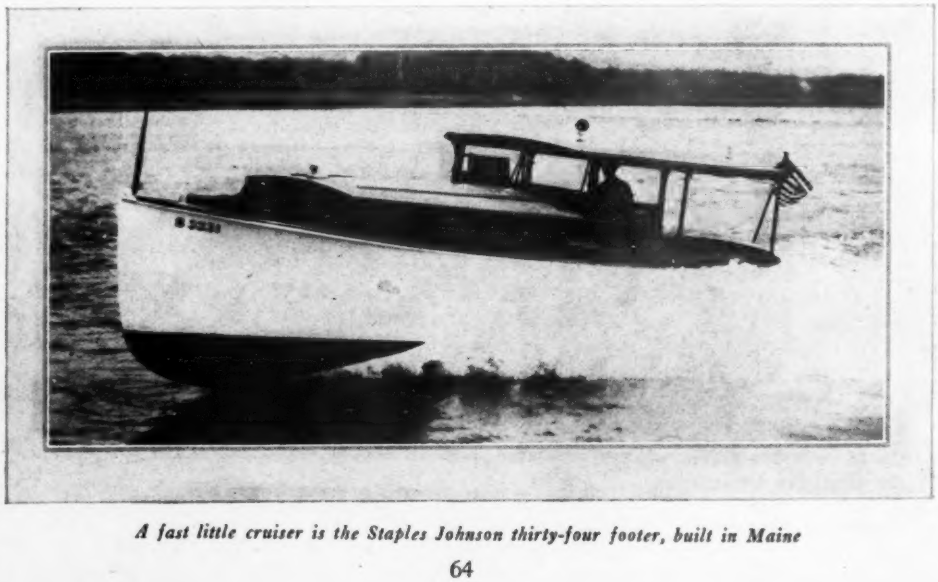
Berths have become wider and softer. Closet, drawer, and locker space has capitalized every nook and corner until ostentatious wardrobes may be carried along by the obstreperous feminines, to the disgust of their males. Dungarees have given way to dinner jackets and yachting is not what it used to be.

Ugly fixtures and lights that stick in your eye have given way to soft illumination from dependable batteries. The erstwhile throne of the toilet room, source of heartbreaking embarrassment to ladies of the party who could not understand its gadgets, have yielded to dependable affairs operable without first taking a course at a gymnasium or to the still newer electric toilets.

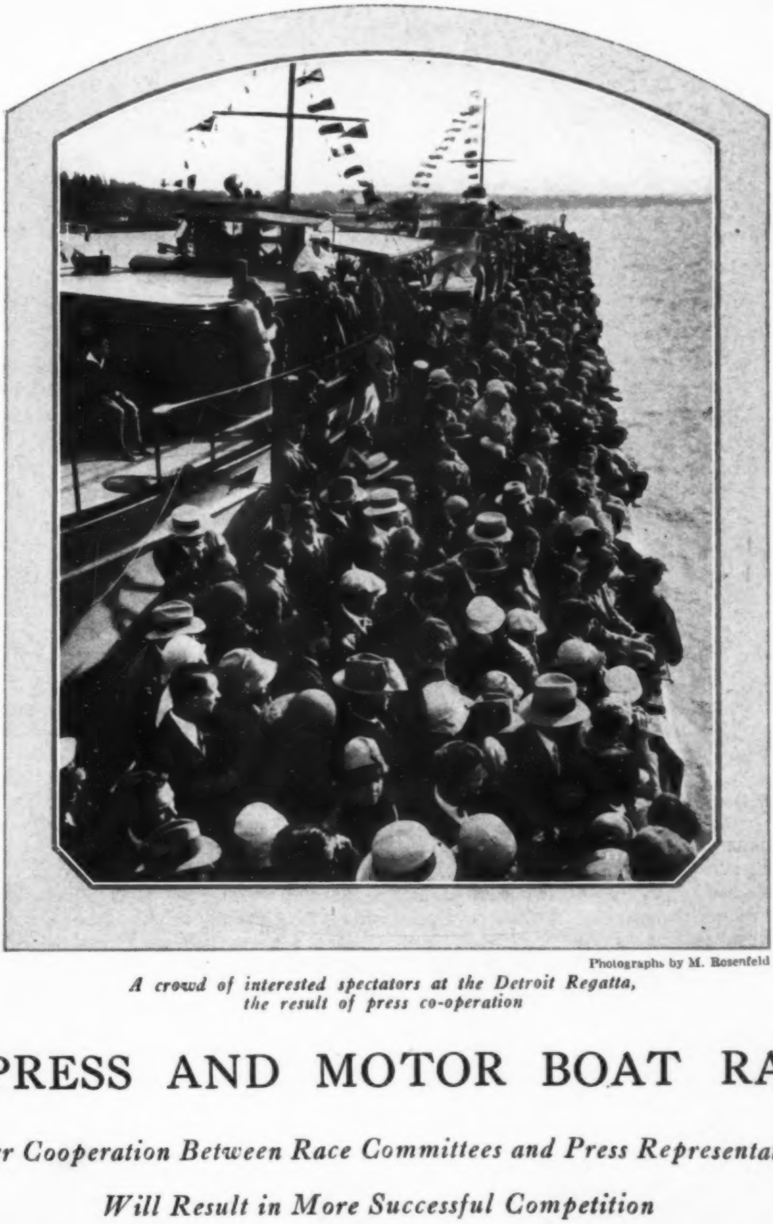
Similarly, means of preparing a palatable meal have undergone cataclysmic changes. Chaste ranges, most often operated on gas, as simple as a domestic cook stove, have displaced the soot-shooters or Plumbers Delights roaring like a blast furnace. Vitreous enamel and non-tarnishing Monel make the galleys as pleasing to the eye as they are practical. Quarters for the crew of one or two men are now so arranged that you do not have to fold them once to get them in there. Hence, the highest type of captain or paid hand is now glad to serve on these easily maintained craft.

In place of the groaning monstrosity of the past generation, that drove the craft if it felt like it, that emitted noxious vapors and dreadful noises, that demanded half the useful space in the boat and the services of at least one resident mechanic, we have a fit companion of the automobile engine; a motor that is as quiet, as steady and as dependable as that in your car. Now generally placed in a separate compartment, often below the deckhouse, they take up little space, are unobtrusive and give remarkable service with little attention and often with mighty nearly no attention. It is to the vast improvements made in marine motors that the present day small

(Continued on page 156)



A fast little cruiser is the Staples Johnson thirty-four footer, built in Maine



Photographs by M. Rosenfeld

A crowd of interested spectators at the Detroit Regatta, the result of press co-operation

THE PRESS AND MOTOR BOAT RACING

Closer Cooperation Between Race Committees and Press Representatives Will Result in More Successful Competition

By EMMETT V. MAUN

BEFORE the days of the healthy outboard youngster, there were fewer major regattas in this country and there was less occasion for constant supervision of racing. In those days, leaders of the sport were able to attend each prominent competition and still see their families now and then.

But today is different. Now, the American Power Boat Association sanctions as many as a score of races in a single week and offers its approval of the officials who have assumed duties subsequent to the present popularity of the outboard.

In many cases, the newer officials are ambitious yachtsmen well-qualified to supervise the work to which they have been delegated, but the details related to the actual competition have suffered from lack of attention. And, that lack of attention is not deliberate; it is unintentional.

One of the common bits of oversight has been the failure to give publicity the attention which it deserves. To drivers, to officials, and to yacht clubs, public notice of all achievement is a reward; to the sport, it is invaluable. It encourages others to enter and it portrays the fine enthusiasm of competition. It announces the forthcoming events and it gives due credit for the past. It records the accomplishments of others and aids in building rivalry.

And yet, such a fine vehicle is ignored, suppressed and neutralized by lack of cultivation or deliberate destruction of seed.

When a yacht club or association decides to hold a

Communication between the starters, judges and the shore maintained by U. S. Navy signal men

regatta, it is customary for the commodore to appoint committee chairmen to whom the various tasks of supervision are assigned. One of the appointments is, usually, a publicity chairman who understands that his principal duty will be that of soliciting advertising for the program.

When that work has been completed, he may supervise distribution of the press badges and then free-lance during the days of the regatta. In one case, a publicity chairman exercised his prerogative by acting as a policeman to see that no newspaper man got within sight of the race course. Another assumed to dictate to reporters that none of them should write of certain events which happened at the regatta. The certain events were well-featured the following morning.

Fortunately, however, those officious gentlemen are rare and pass into oblivion in face of the conscientious type which has better judgment and which would serve well if the work were outlined.

What should be done and what procedure should be followed can be tabulated from several years of experience in specialized work of that character.

In the first instance, it might be well to chronicle a bit of the background of motor boat publicity and it might be well to point out the work which has been accomplished.

Within the past decade, no single agency has done so much to publicise boat racing and the motor boat industry as the National Association of Engine & Boat Manufacturers. It has provided great sums of money for sending representatives of its publicity department to major regattas. It has appropriated money for national publicity on each race, no matter what the location of the course. Its representatives have assisted local regatta chairmen in contacting the press and providing the reporters with accurate information.

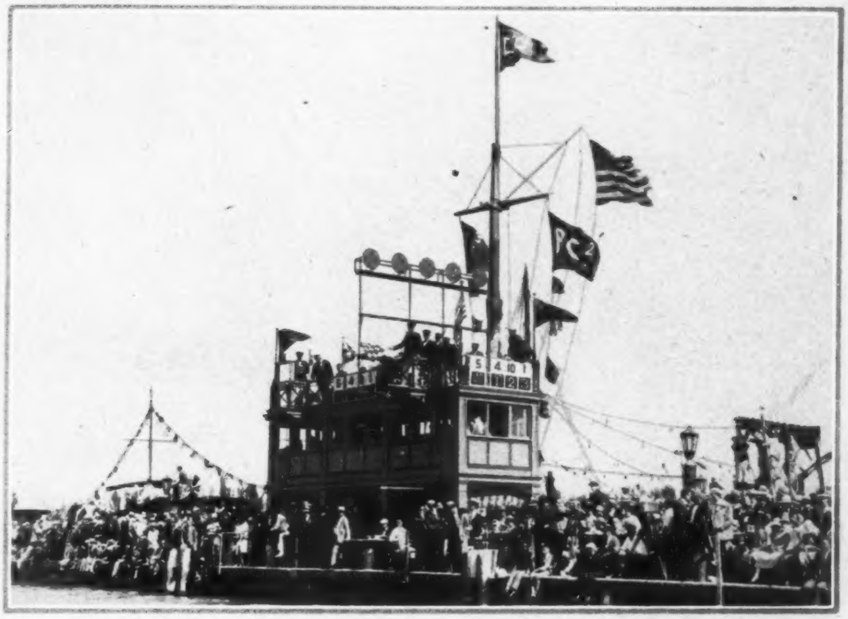
As a result of such activity, the old school of newspaper greeters has disappeared so that it is now safe for a reporter to announce openly that he has been assigned to the task of covering the regatta. Those few yachtsmen who still insist that they "throw every newspaper man off the committee boat" are fond of echoes and mean little of what they say.

Nevertheless, those local committee chairmen who are interested in prosecuting a race to a successful conclusion will find that there are certain simple methods of procedure which should be employed.

In the first place, all information concerning a regatta should emanate from a publicity chairman who is exactly that. He should assemble all data on the course, the schedule of events, the prizes, the sanction.

REGATTA COMM.

Only workers should be allowed on the committee boat. Many guests interfere with the efficient work of the committee



The racing equipment used by the Detroit Yacht Club in conducting its regatta. It includes time discs, event and position number cards, and flag signals.

the drivers and the committee. That information should be passed on to motor boating magazines, local newspapers and to the National Association of Engine & Boat Manufacturers. Thereafter, new developments such as historical trophies, prominent drivers entered, etc., should be handled in the same manner.

For the benefit of drivers and interested yachtsmen who would attend the regatta if given early information, the publicity should continue in a steady stream to gain regular mention in the columns of newspapers and magazines.

Selection of a position for the committee boat is a bit outside the realm of publicity, but upon many occasions there is little excuse for using a boat at all. A stand located ashore, along one stretch of the course, is far more desirable. It allows the officials more freedom, it makes possible better contacts between drivers and timers or starters and it obviates the necessity of ferrying back and forth.

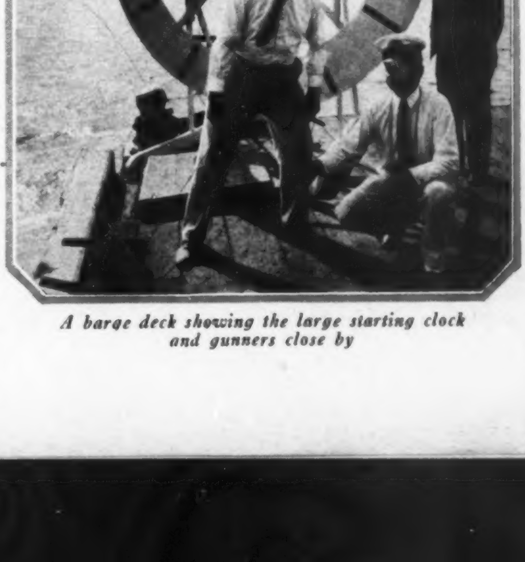
From the publicity standpoint, the shore station is infinitely better. Reporters may telephone results of each race. Photographers may send in plates and all may go ashore for food. Also, picture men will find it possible to hurry to the pits for a shot of a record-breaker or a winner and will not have to depend upon a distant view secured at random.

If there are choices of where the committee boat may be situated, it would be of great assistance to photographers if the barge were placed north and south with the starting line on the east so that the glare of the sun will not aggravate the business of taking pictures. Also, for the benefit of photographers, it is well that the drivers should be drawn in close to the barge inasmuch as the start always makes the best pictures.

Such details might sound insignificant, but the merit of them is great enough and would be appreciated by the men assigned to the task of covering motor boat racing.

When all such matters have been decided, it is well to advise the newspapers and the photo syndicates of such plans. At the same time, send them complimentary press badges, asking that they assign one of their men to cover the event and assure them that you have provided every facility for their convenience and comfort.

On the day before the regatta, prepare a list of all drivers present and send it to the newspaper men or call them and tell them that you have it ready. When entries have closed, prepare a list of all drivers, the names and numbers of (*Continued on page* 156)



A barge deck showing the large starting clock and gunners close by

E. Levick, Inc.

The Manhasset Bay Yacht Club's new building affords great opportunities for social life to interest the yachtsmen

WILL THE YACHT CLUB SURVIVE?

Changing Conditions in Club Life and Requirements for More Complete Service for Boats Call for Careful Thought

By HENRY CLAY FOSTER

THE kaleidoscopic changes taking place in our favorite sport of motor moating are causing some of us to exult in the progress scored, others to wag our heads in bewilderment at the rapidly changing scene before us, and still others to seek clues as to what that onrushing future holds for us and our beloved institutions of the sport. Certain it is that the old order changeth yielding place to new. The rapid development of new and astonishingly efficient types, the multifarious engineering improvements in every nook and cranny of motor and hull, the chrystallization of the industry with capital entering upon mass production of engines, hulls, stock boats, and accessories on a scale never before dreamed of in former days, the evidence piling up that the public is in the early stages of stampeding to the open waterways from the crowded highways, the appearance of new and modern waterfront facilities, service and storage yards, commuters' terminals, pleasure boat landings, and a hundred other changing aspects—all set one to thinking what our sport will look like a decade hence.

Mr. Robert Louis Stevenson once opined, among other things, that "Of all forms of human error, prophecy is the most gratuitous," and was right about it by and large. The Sage of Samoa, however, certainly had no intention of suppressing the natural tendencies of the race in the matter of looking into the future, and if he did cherish such a notion, it was woefully vain. There is a distinct difference between prophecy and vision. Both are hazy enough, but from prophecy we get amusement, and out of vision we get action, or should. Let us, then, take a look backwards, brush away the mist of sentiment, examine the present tendencies and try to envision the probable effect of these in the logical sequence of events.

Our yacht clubs in past decades were the citadels of the sport, entirely surrounded by unfavorable circumstances except the existence and continual presence of water upon which to float our boats. All of us cherish grateful, almost loving memories of our yacht club life in the good old days, which, in truth, were not half so good as the good new days we are now enjoying to the full. The fact is that our yacht clubs for the most part rocked along in a most haphazard manner. The average yacht club has been a mere boat house for some members, for others a lounging place where yarns were swapped continuously, more or less recklessly, and crabbing at their officers, customs, conditions, and what not, was the favorite pastime of the porch chair membership. Expecting something every minute, service, improvements, perpetual vigilance as to their slightest wants—and a thousand other things were constantly demanded by the grouches who were gradually joined by their hearers, for repetition has its convincing power regardless of logic.

The receptive type of member has been the yacht club average since the sport began. Perhaps the majority has been lessened the last year or two, but it still stands by a safe margin. If a yacht club had exactly one-half of its active membership dedicated to doing something for the club instead of idly expecting the club to do something for them, that yacht club would be a world wonder. Human nature, however, is not cast in such lines. One-fifth of the membership, hardly ever more than that fraction, does all the work, is responsible for not only the maintenance of the *status quo* whatever that may be, but for all the progress when any is accomplished.

Are these rough words? They are not intended to be. They merely represent observed facts that all active old-timers in yacht club life know to be solid, however much we regret them. Stop and think it over—in a yacht club of 100 members, if there are 20 active, live, ready-to-serve members—not spasmodic office-seekers destined to develop into alibi artists once they have obtained the desired titles—you have an organization with a destiny in the sport in its locality. One out of five members—active. That's all. By active, I do not mean a member who attends monthly or quarterly meetings, sits on the front porch or aboard his boat and growls at the steward or employees and weeps on the shoulder of the house committee chairman because of some minor deficiency. I do not mean the lazy grouch who takes the attitude that he ought to get service, convenience and value twenty times the amount of his dues just because he pays those dues. I mean direct-minded, energetic, non-procrastinating members, who can and will take a little of their leisure time to help build up something for the club as a whole and feel rewarded in the satisfaction that comes from a job well done and the progress achieved for the organization of which they are a part. There is a huge difference between these two types of so-called active members.

There has been something all wet about our membership psychology in yacht club life heretofore. Maybe it is common to all club life—perhaps it is. The age-old division between the boat owners and the porch chair members is founded on two fundamental errors, one on each side. The boat owners feel that they are making activity, and keeping the club alive by owning boats and using them. Now isn't that nice of them? As if they don't like to own and use their boats! And the rocking chair members feel that they are paying dues—and because they do not own a boat—they are supporting a club for the benefit of the boat owners. Isn't that nice of them? They are no more martyrs to the club's good than are the boat owners. They are there because they want to be. They are not bound in any way to support the club with their dues or to press down the cushions of the front porch chairs against their wills. They like it or they wouldn't be there, you can be certain of that.

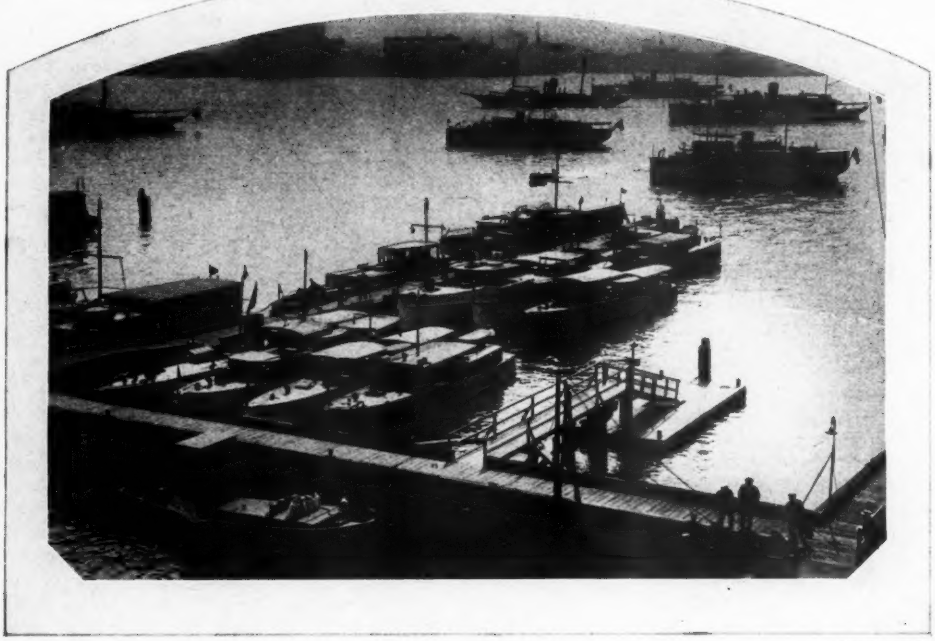
The time has come, however, when yacht clubs are about to undergo a really fundamental change. This change is inevitable in the logic of events. It may be a change in personnel—it is certain to be a change in policy and in activity. The fellowship which binds us together is taking on a more tangible aspect. Everything for that matter is becoming more clear-cut in the sport, including human relations.

In the future of things, will the yacht club survive? What reason will there be for its existence—except its fellowship? The time when one almost had to join a yacht club to have anything like decent storage and motoring service, is passing. That is, in prospect there are plenty of substitutes for many yacht club services, soon to be realized. The development of marine service stations, repair shops, storage yards, equipped with modern machinery, working skilled men throughout the year, with active, energetic business men backed by capital, operating them, is fast rendering the yards maintained by many yacht clubs for their members both obsolete and unnecessary.

Those boat owners who look at the club from a strictly material point of view—for what the club can do for them—will soon betake themselves and their boats to such service stations. They may remain members, inactive and non-attendant, for the privilege of flying the club burgee—and they may not. The time will soon come when the club burgee will not be so important as it has been.

(*Continued on page* 155)

The handsome new clubhouse of the Grosse Pointe Yacht Club is one of the finest in the country



M. Rosenfeld

The New York Yacht Club Landing at 26th Street East River, used extensively by many Long Island Sound Commuters

MORE YACHT HARBORS EVERYWHERE

Recent Survey of Small Boat Facilities Showed Great Need for Improvements Which Are Now Rapidly Being Effected

By IRA HAND

LESS than a year ago, the National Association of Engine & Boat Manufacturers set out for itself a program of leadership in a movement for better waterways, better harbors, more yacht basins and more boat anchorages. The plan, adopted at the most recent annual meeting of the directors, had been discussed for some little time and finally evolved into a decision that a survey of all existent facilities would be made to supplement suggestions for additional developments.

At that time, H. A. Bruno—R. R. Blythe & Associates were delegated to the task of making the survey and submitting their recommendations to the directors of the National Association. Within five months the entire report was ready; the survey had been carried to the major cities and a sectional view of the situation was gained.

Immediately thereafter, MoToR BoatinG published the entire report and it was reprinted into booklets, an edition of 5,000 copies, which were deemed sufficient for the present or subsequent demand.

Not more than three months later, the situation had changed so rapidly that the directors of the Association gathered at a special meeting in Detroit to consider the problem of satisfying the growing interest and what could be done to carry on the work so auspiciously started. It was decided then that 15,000 additional copies of the booklet should be printed; that a survey of recent changes should be made and that plans for 1930 should include the publication of a more comprehensive brochure which would include divisions for the study of marine service stations.

Looking back over that period from January of 1929 to January of 1930, the work which has been accomplished by municipalities, individuals and yacht clubs is little short of phenomenal. The correspondence that the National Association has had with mayors, civic leaders, senators, secretaries of clubs and yachtsmen is equally imposing.

Of the many cities which have appropriated money for the construction of yacht basins, Alameda, California, is an excellent example. After considerable difficulty, the matter was referred to the voters on a special ballot, and the referendum carried, so that $300,000 was made available for immediate work on a basin in upper San Francisco Bay. At San Diego, D. W. Campbell of the Chamber of Commerce has been particularly active in urging the development of yacht harbors which will be a part of the long chain now extending from Seattle, inland to Portland, and south to Redwood City, and Oakland. In Hollywood, Carl Bush of the Chamber of Commerce, has been influential in securing a pleasure boat harbor for yachtsmen living in that section.

Along the southern coast of this country, Corpus Christi is pushing plans for anchorage space within the shelter of the city pier while Galveston is urging the development of Offatt's Bayou to supplement the present facilities offered by the Galveston Wharf Com-

Facilities provided by the Corinthian Yacht Club of Washington, D. C., for the shelter of its fleet

pany. In addition, East Beach is being developed to harbor three hundred small craft.

At Gulfport, Miss., the Chamber of Commerce, under the direction of C. C. Prescott is planning the development of its waterfront. Miami, home of the finest yacht harbor in this country is trying to supply the needs of the great winter fleet now congregated there. Every facility is being taxed. St. Petersburg is ready to build a pier and harbor adjacent to the commercial pier and hopes to have it ready late this winter.

Charleston has placed a plan before the City Council asking the appropriation of $185,000 for initial work on the first units of their yacht harbor development. Because of its strategic geographical position, Dr. Roy S. MacElwee, commissioner of Port Development believes that a basin would attract yachtsmen cruising from the North to Florida and back. At Jacksonville, the Huckins Yacht Corp. have built a yacht basin to handle the North-South Cruisers.

In Washington, the Chesapeake & Potomac Power Boat Association is interested in clearing the waterways of the Potomac to eliminate a number of sandbars and afford better channels for cruising.

In the Middle and Central West, Detroit and Chicago have taken substantial leads in development of motor boat facilities. A new $2,000,000 Chicago Yacht Club house and harbor is under construction in the latter city, adjacent to the Navy Pier, while the Pier itself is being used as a permanent show room and service station open to the public. In Toledo, one of the newspapers is urging the city to develop pleasure boat facilities for the benefit of owners on the Great Lakes, and that paper, the *Blade,* has expressed approval of the propaganda being spread by the National Association of Engine & Boat Manufacturers through the medium of the Yacht Harbor Survey.

Cleveland, with its excellent natural facilities and its advantages offered by Edgewater Park, has been asked to develop the yacht harbor plan. The Metropolitan Yachting Association, headed by John H. Cox requests an appropriation of $200,000 for the work and outlines an adequate harbor and club arrangement which might be consummated with that sum.

At Cincinnati, E. C. McHugh of the Ohio River Valley Yacht Club, is undertaking the promotion of a combination club and harbor which would follow closely on the interest aroused in that area by President Herbert Hoover's dedication of the lock system recently opened. Cairo, Ill., also a participant in the recent celebration, took up the National Association plan following publication of the booklet. There, the Junior Chamber of Commerce has been instrumental in urging a yacht basin at the junction of the Ohio and Mississippi Rivers.

The Chain Yacht Club at St. Louis has met with the Mayor and other city officials and has urged the development of a harbor on the Mississippi.

The municipal boat houses in Detroit are now being built opposite the Detroit Yacht Club and will take care of a great number of boats on the river, although the new facilities will not be adequate, due to the great interest in boating in that area. At Bay City, Mich., the Yacht Club is considering changing its present site to gain room for expansion. Such a change will involve the construction of an artificial harbor, but the work will be undertaken early this year to prepare for the summer cruising on Saginaw Bay.

A city-owned boathouse to accommodate 200 craft of various length and an extension of the present Riverside Park are being advocated by councilmen in Buffalo. A recent fire there destroyed one of the largest boat wells in the

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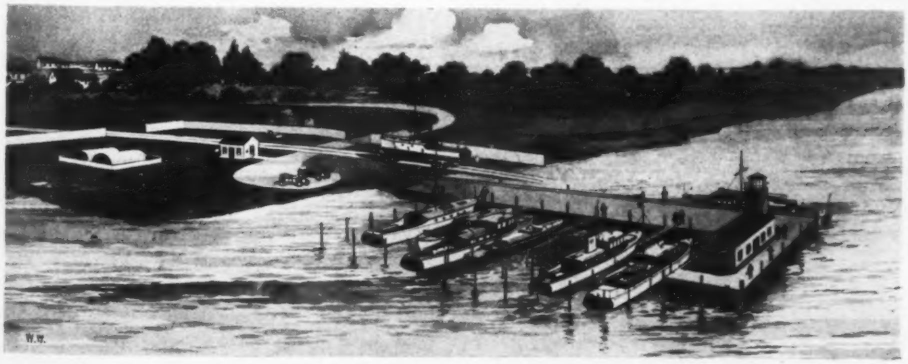
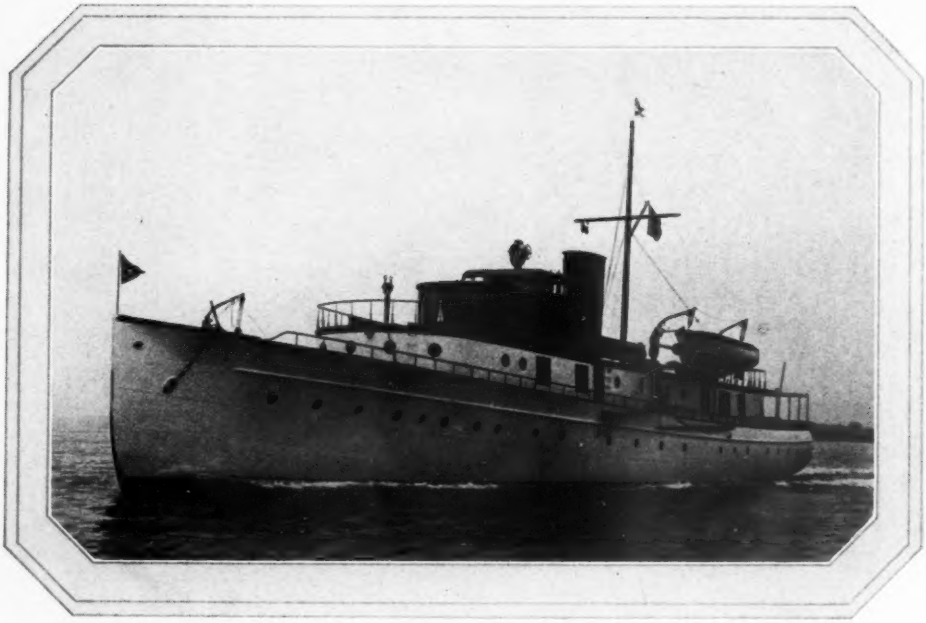


The Florida Yacht Basin at Jacksonville which provides berths and service for tourists in Florida waters



M. Rosenfeld

Vara, a fast 150-foot diesel yacht designed by Purdy for H. S. Vanderbilt and equipped with a pair of Treiber diesel engines

YACHTS AS AIDS TO BUSINESS

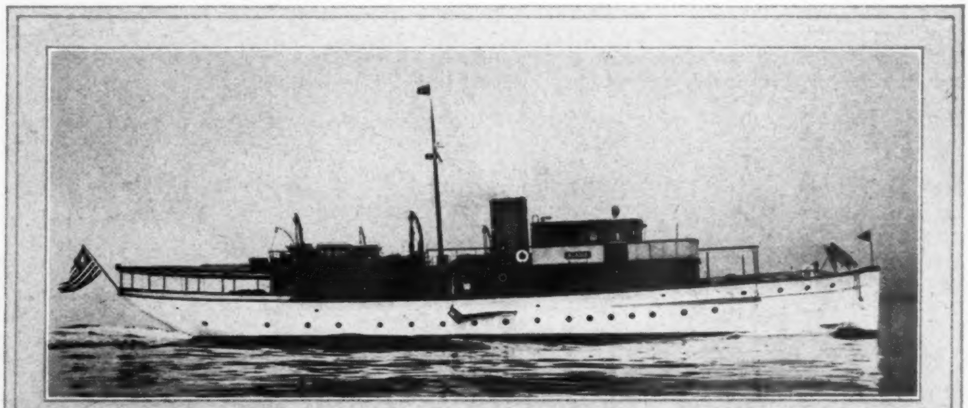
A Form of Recreation Which in These Strenuous Days Is Almost Essential to the Successful Development of Bigger Business Thoughts

By JOSEPH A. MacDONALD

"THE mind of man never conceived, and the heart of man never contrived a work of more exquisite beauty than that wonderful creation of oak and hemp—a ship." *Ruskin.*

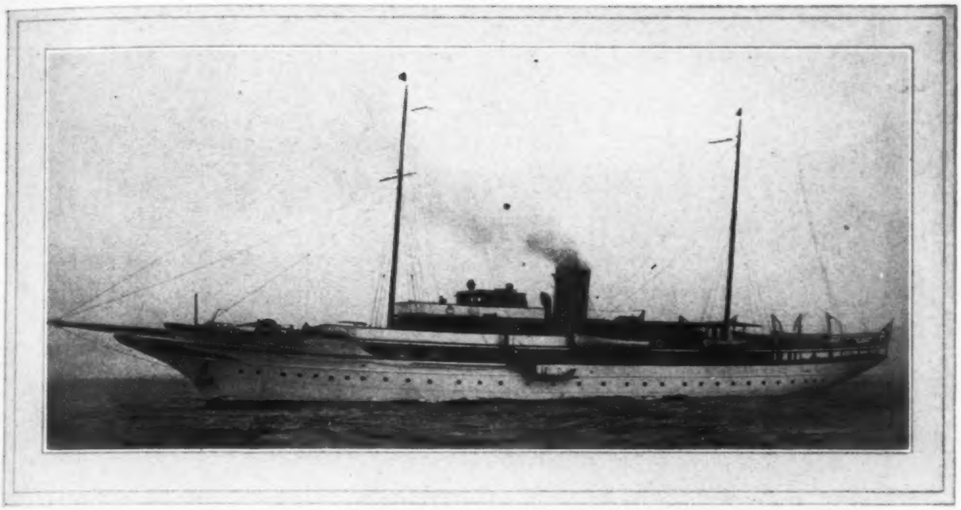
When John Ruskin, the great Apostle of Beauty, at his home in Brantwood, wrote this tribute to ships, oak and hemp was the order of the day; steel craft was yet to come—but the exquisite beauty so artfully expressed still holds true in the watercraft of today.

Yachting, in his day, was a luxury unheard of. For a man to spend what would then have seemed a huge fortune for a pleasure craft would have been just cause for public ridicule. But times have changed. The tempo of business is moving faster. Men are living more strenuous lives. They must play more in order to form a balance.



M. Rosenfeld

Acania is an able diesel yacht, 126 feet long, powered with two Winton diesel engines and built by Pusey and Jones



One of the largest American built diesel yachts. Hi Esmaro, built for H. E. Manville, is 266½ feet long, and was designed by H. J. Gielow, Inc. She is equipped with two powerful diesel engines

While it is true that yachting—at least so far as the use of large craft is concerned—is a form of recreation that but comparatively few may enjoy, yet, contrary to popular opinion, it is not, or should not be, looked upon as mere indulgence, an excuse to play.

Robert R. Updegraff, in a most interesting book entitled "The Subconscious Mind in Business," touches upon a principle which substantiates the statement often made by us to prospective yachtsmen. Mr. Updegraff points out that, particularly with the important executive, the major part of his constructive work is done away from the desk. "The conscious mind," he writes, "may be compared with a stove and the subconscious mind with a fireless cooker. We start our constructive thoughts with the heat of the conscious mind and then put them in the fireless cooker to develop.

"W. T. Grant, who started with a modest store in Lynn, Massachusetts, only a few years ago and built up a chain of more than two hundred stores, loafs a great deal. His vice is boating. He has a house-boat and a sailing yacht. When he goes to his office it is not so much to work as to unload a quantity of fresh ideas and policies which have accumulated in his fireless cooker."

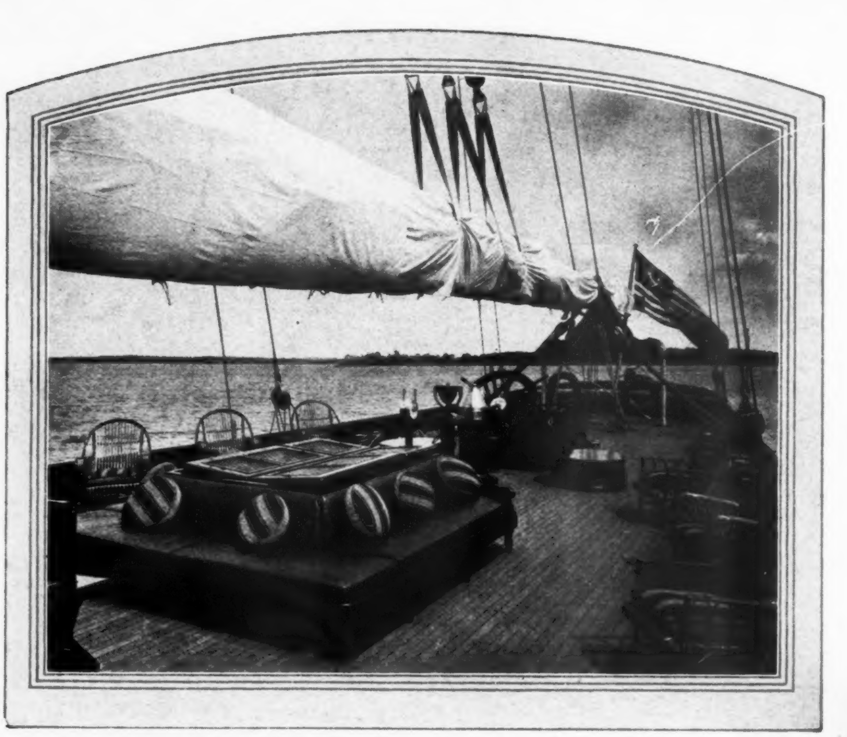
Captains of industry do not attain their positions as a result of physical effort put into their work, but because of their counsel and judgment. And, just as expressed in the paragraph above, at the desk is not where their important work is done. They use their offices as a convenient place to meet with their associates to put into force ideas, most of which have been conceived during hours of relaxation.

Some executives have found that their best thinking is done while on their morning walk to the railroad station; some while reposing at the fireside in their own libraries; but most of them agree that their best thoughts come while in an atmosphere free from disturbing interruptions.

Psychologists tell us that the good ideas which continually pop up at the most unexpected times are from the subconscious mind which has been diligently working on our problems while the conscious mind has been turned toward lines of diversion. Mr. Updegraff further states: "C. M. Keys, president of a number of concerns, including the Curtiss Air-Craft Corporation, in one year, recently, spent five months fishing, golfing, and playing tennis in Cuba, Florida, and Europe. Mr. Keys always leaves his office at four o'clock and has not

(*Continued on page* 155)

A steel diesel yacht, 115 feet in length, designed by the Consolidated Shipbuilding Corporation, and powered with two of their Speedway diesel engines



An expansive after deck is furnished with numerous chairs and built-in seat with weatherproof cushions

CARLL TUCKER'S SCHOONER MIGRANT

Largest American Built Sailing Yacht a Noteworthy Addition to the Pleasure Boats of the East Coast

MIGRANT, a 223-foot auxiliary schooner-yacht, recently placed in commission for its owner, Carll Tucker of New York, adds to the fleet of American pleasure boats one of the most unique craft on the East Coast.

The new vessel, designed by Henry J. Gielow, Inc., and built at the shipyards of the George F. Lawley & Sons Corporation, Neponset, Mass., holds the distinction of being the largest of her type ever built in this country.

On the waterline, Migrant has a length of 168 feet. She has a beam of 34 feet, a draft of 14 feet and is equipped with a 950-horsepower Bessemer diesel engine operating on a single screw to give a high speed of 11 knots and a cruising speed of 9 knots without aid of sail.

Schooner rigged, she carries on the foremast, a jib topsail, a flying jib, a jib and fore staysail, a fore topsail and a foresail; on her mainmast, she carries a main sail, a main topsail and a main topmast staysail. On her mizzen, she is fitted with a mizzen sail, a mizzen topsail and a mizzen topmast staysail, 22,000 square feet of canvas in all.

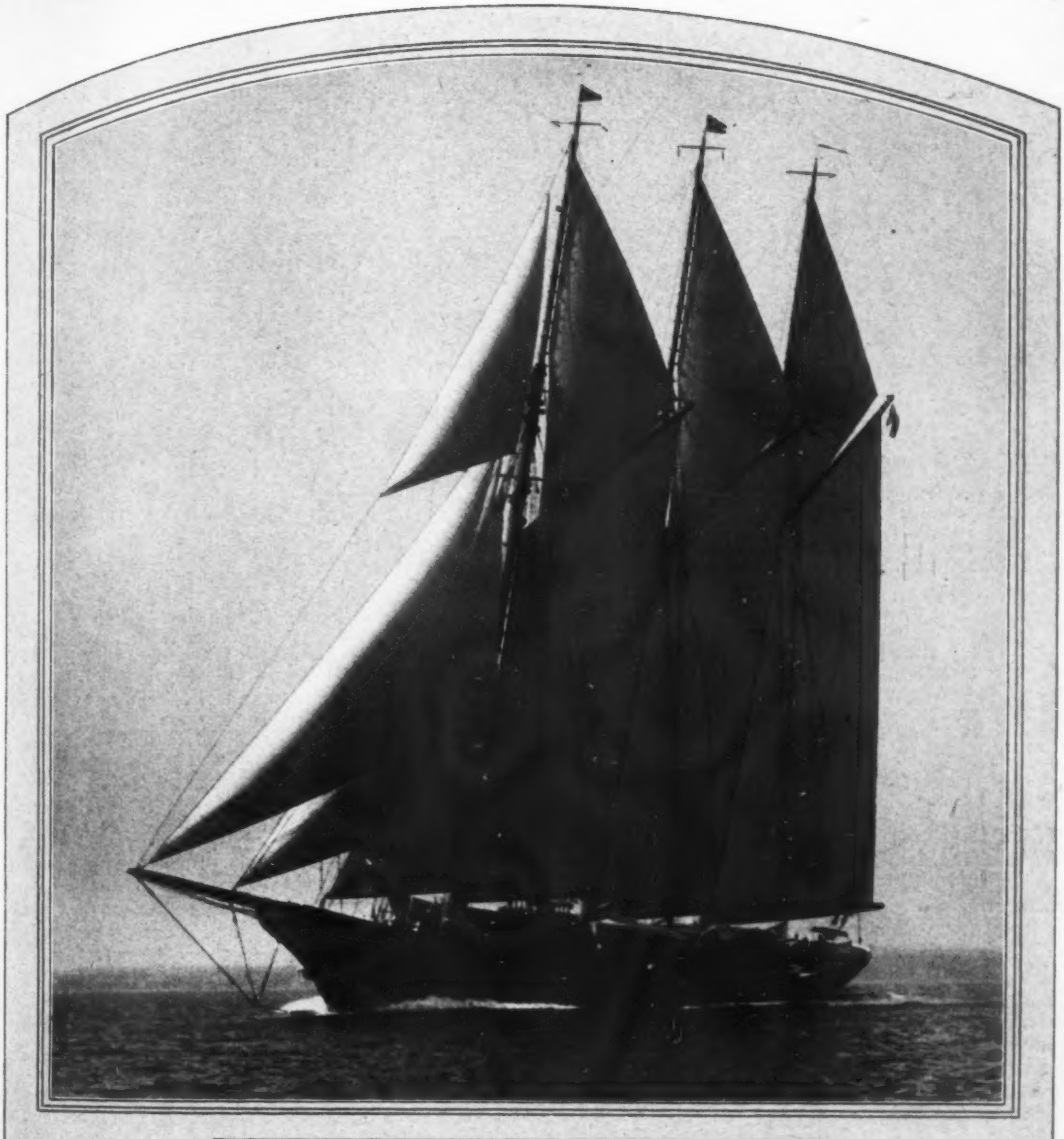
All exterior finishes are of teak in addition to teak decking. The deck shelter is finished in varnished teak. This housing runs fore and aft, measuring about 12x10 feet. The after end is open and there is a built-in sofa together with a cupboard for books.

All accommodations, except the owner's shelter and the captain's stateroom are located on the cabin deck and all are fitted out after the motif borrowed from the style of old sailing ships. The accommodations include, in addition to the owner's and the guests' staterooms, a dining salon running the full width of the vessel; a breakfast room opening off the dining salon, and, on the main deck, the captain's quarters, chart and wireless room and the wheelhouse. The after deck house is fitted as a lounge.

Amidships, on the lower deck, is the beautifully appointed main lounge. The woodwork is of English oak, panelled in character and style of the old sailing ships of clipper days. A wooden mantel surmounts a cozy fireplace which has been equipped with a coal-burning grate. There are two built-in bookcases with glass doors. The woodwork is brown in tone and a light, taupe colored rug and natural color linen curtains with block print designs follow the color scheme. All furniture is in Queen Anne style and lighting fixtures are natural polished bracket lights.

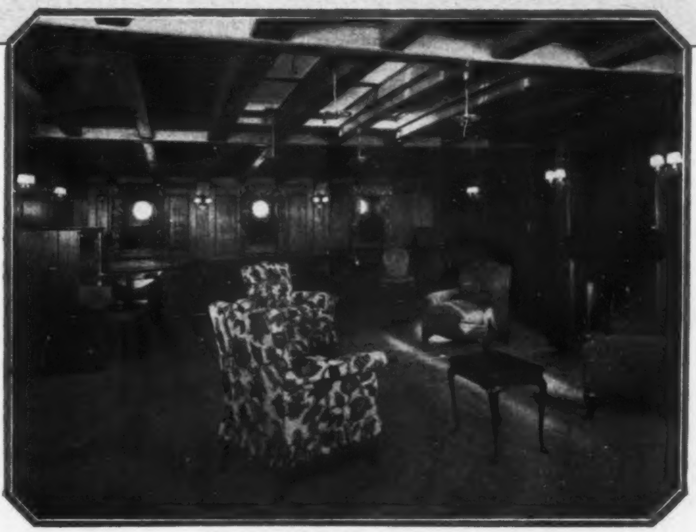
A stairway running from abaft the main lounge, and up out of the lower passage, leads to the deck lounge. This is a spacious

(Continued on page 160)

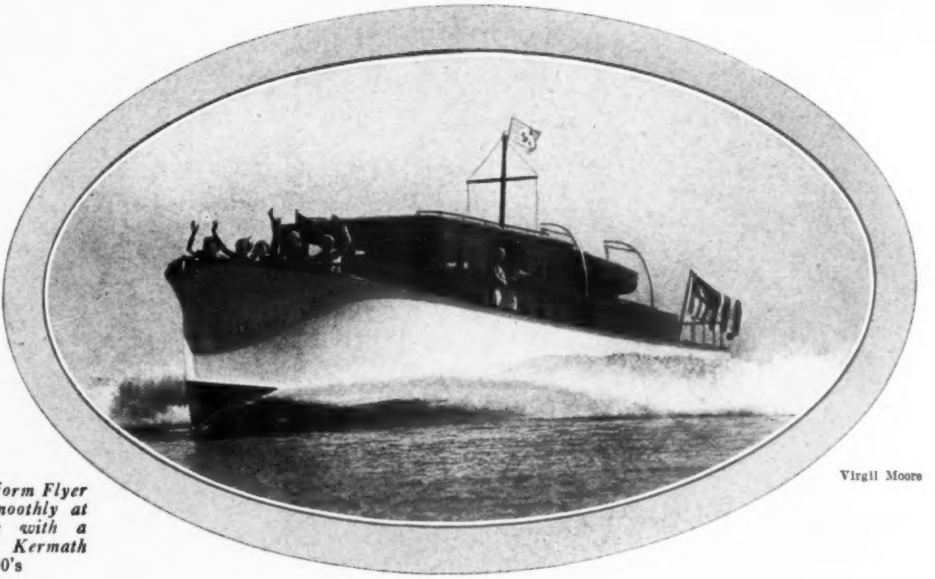


E. Levick, Inc.

The statuesque new schooner yacht, Migrant, built for Carll Tucker, is 223 feet in length. She makes an impressive picture under her large spread of sail



Midship on the lower deck is the beautiful main lounge. It is panelled in English oak and has a wooden mantel surmounting a cozy coal burning fireplace



The Fairform Flyer moves smoothly at 20 miles with a pair of Kermath 200's

Virgil Moore

A FLYER OF DISTINCTION

Newest Cruisers of the Huckins Yacht Corporation Embody Features of Comfort and Convenience Seldom Found in Small Boats

WITHIN the first year of use in the hands of owners, the Fairform Flyer has won an enviable reputation and hung up some records to shoot at.

In June, a fleet of these craft made the longest squadron cruise ever undertaken by pleasure yachts, running the eleven hundred and sixty-one miles from Jacksonville to New York with no worse calamity than a pleasure-bent mutiny of owners who kicked out of the schedule to spend more time amidst the lures of Sea Island.

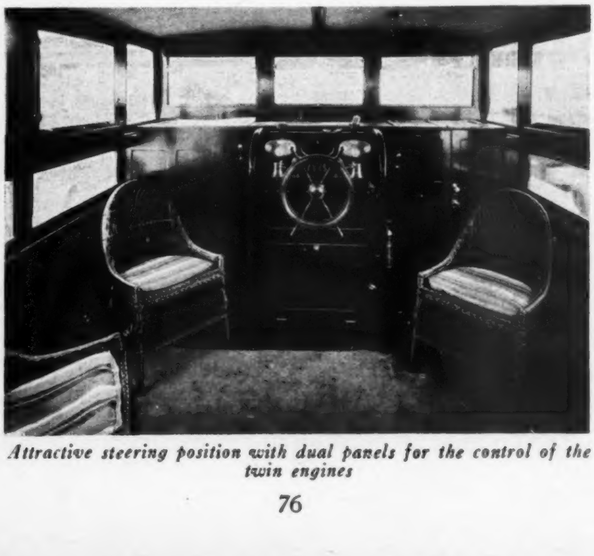
When this fleet disbanded at New York in June, Ariel, owned by those ardent yachtsmen, Avery G. Wright and Ben F. Hazelton, Jr., continued on to her home port at Toledo, Ohio. Thereafter, the moment one of the owners would return from a cruise the other would hop aboard and be off, and without realizing what they were up to, they rolled up a world's record mileage. Between June 15 and November 1 Ariel exceeded 10,000 miles.

If this sounds low as compared with the motor car, consider that for equal power produced by her pair of Kermath 200s, that the automobile would have made nearly 150,000 miles, or a distance considerably above the life of the average car.

Several other Fairform Flyers have made distances in excess of six thousand miles or triple the mileage made by the average yachtsman in a season, and have now returned South, for winter use in Florida.

During this time, many have withstood terrific weather and well justified the years of research, test, development and study that went on before this boat was ever offered to the public. Avery Wright tells of crossing Lake Erie in a storm with waves twenty feet high and never a breaker coming aboard, and of another trip late in the Fall, with the temperature eight above zero, with ice weighing a ton or more forming from spray on the bow and Ariel still refusing to stick her nose under green water.

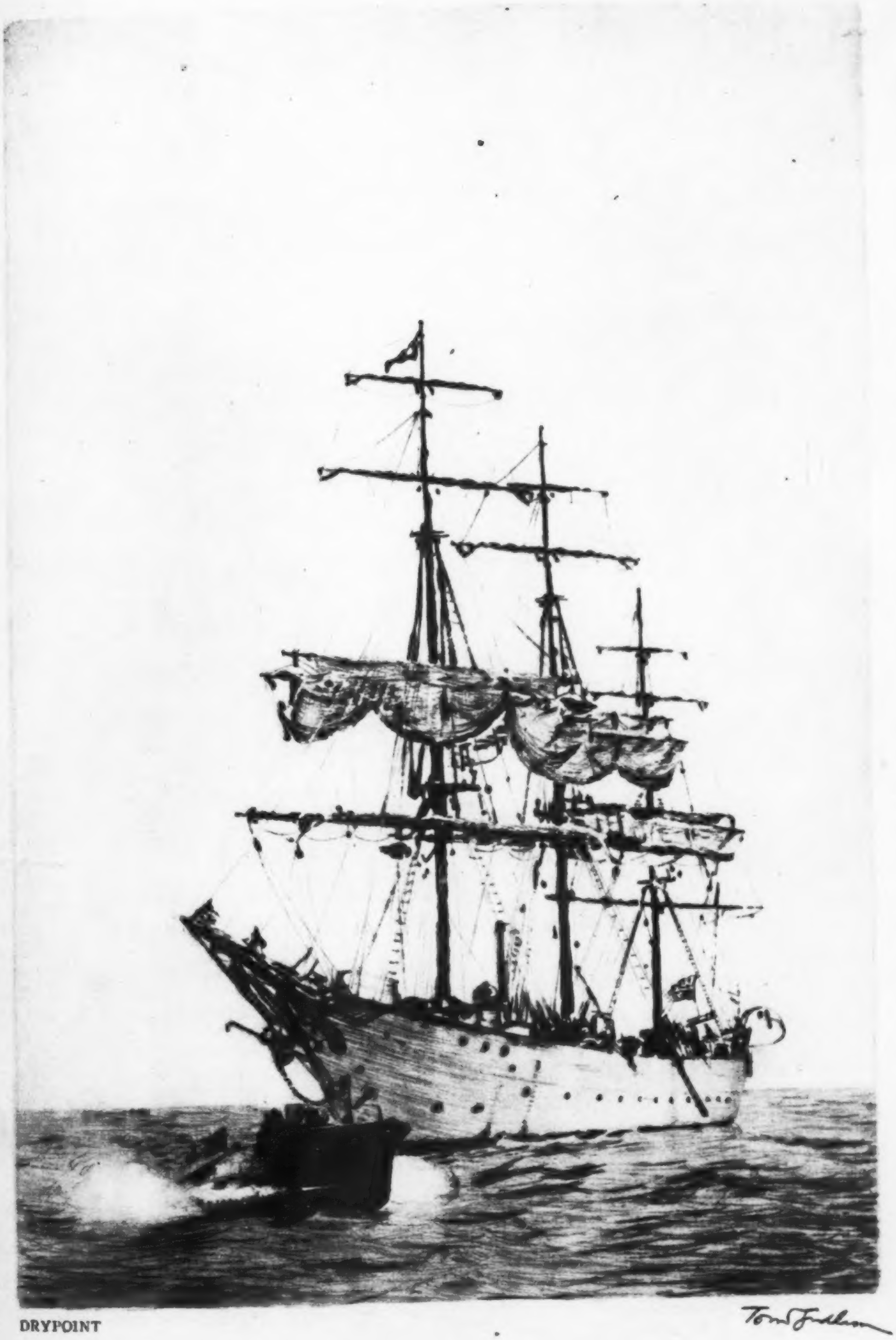
M. Rosenfeld



Attractive steering position with dual panels for the control of the twin engines

Although the builders, the Huckins Yacht Corporation bring out no yearly models, the craft now being produced incorporate features of comfort and convenience seldom found in other than yachts of great size. During the summer the company has filed many a patent and has developed the Fairform Electric toilet, a simple rugged affair with smooth exterior and few working parts; the Fairform Manual Hydro

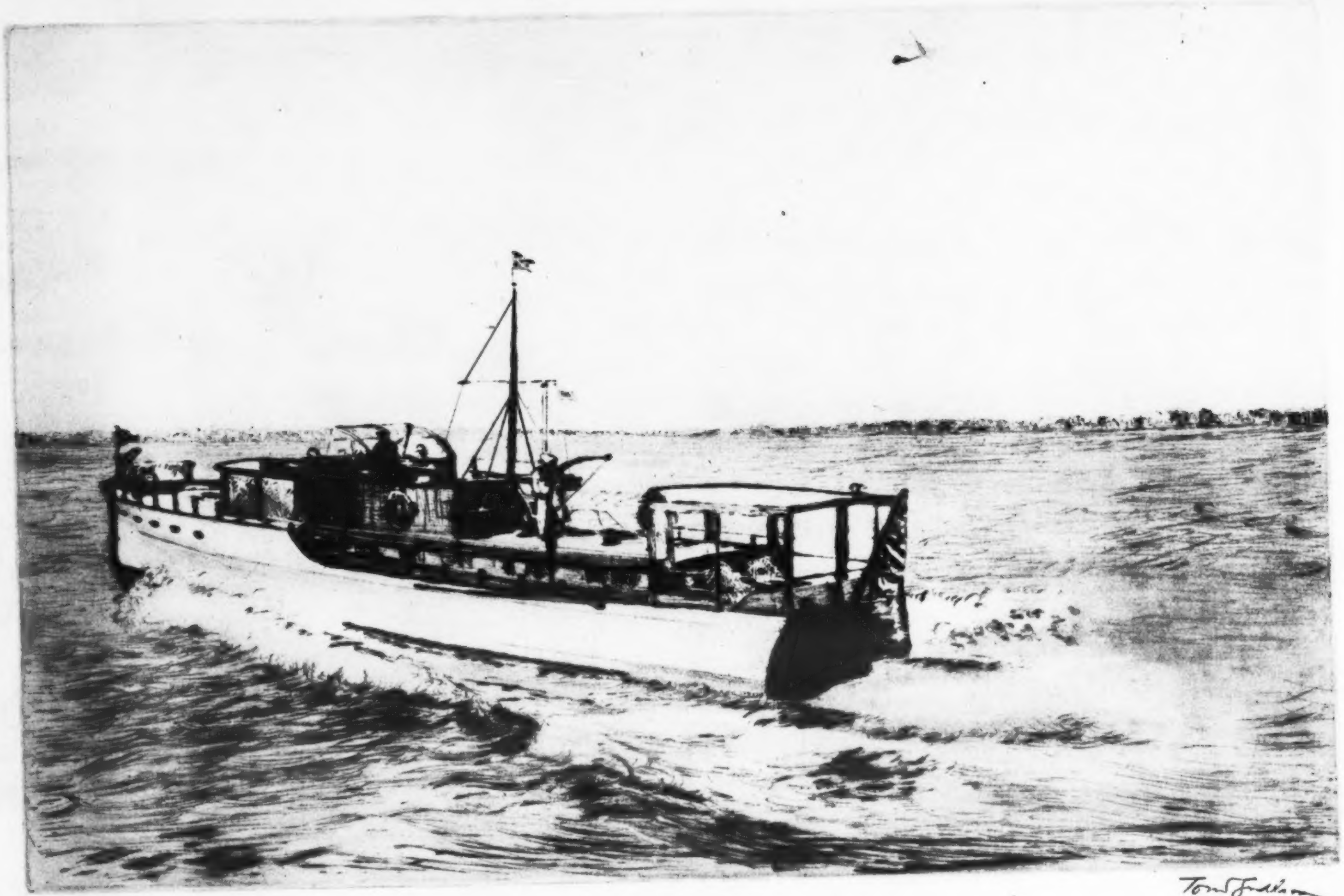
(*Continued on page* 160)



DRYPOINT

SEVEN SEAS

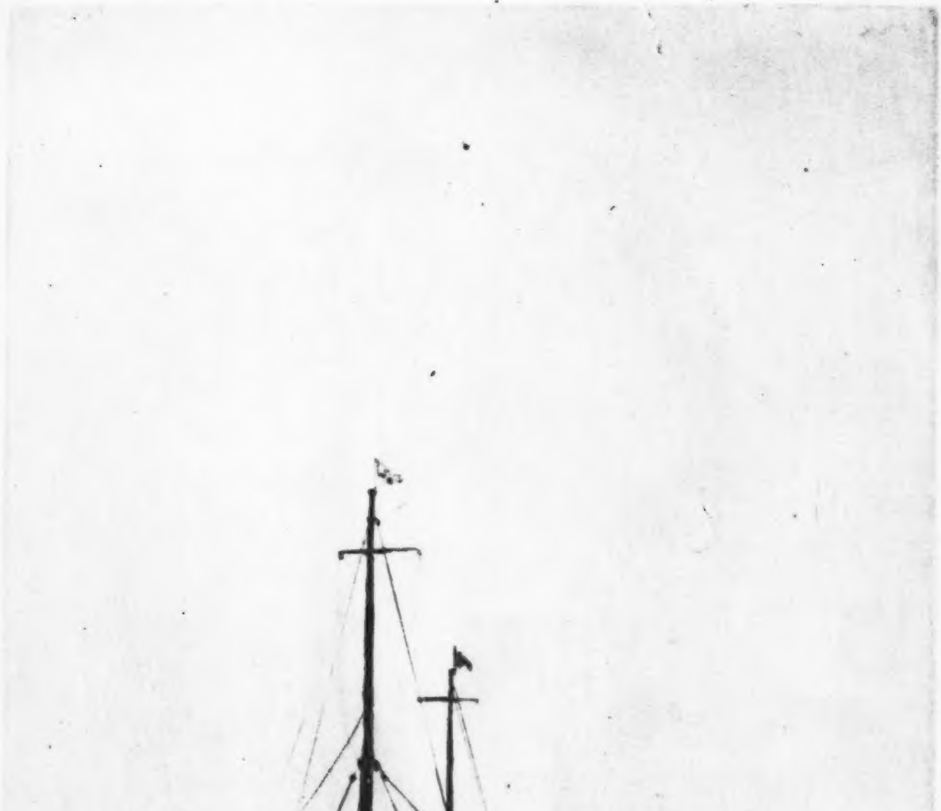
A Full Rigged Ship Converted
to a Motor Yacht



DRYPOINT

SAZARAC

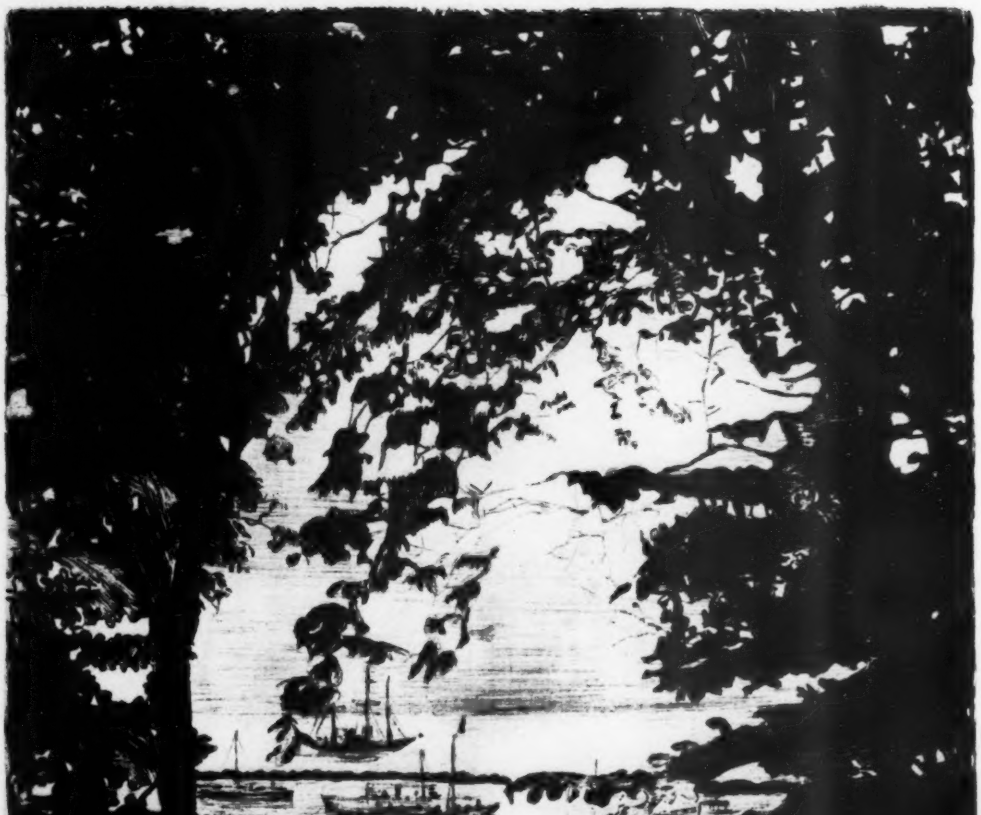
Owned by Commodore George H. Townsend



DRYPOINT.

VIKING, OWNED BY GEORGE F. BAKER, JR.

A 217-Footer Built by Newport News
Shipbuilding and Dry Dock Co.



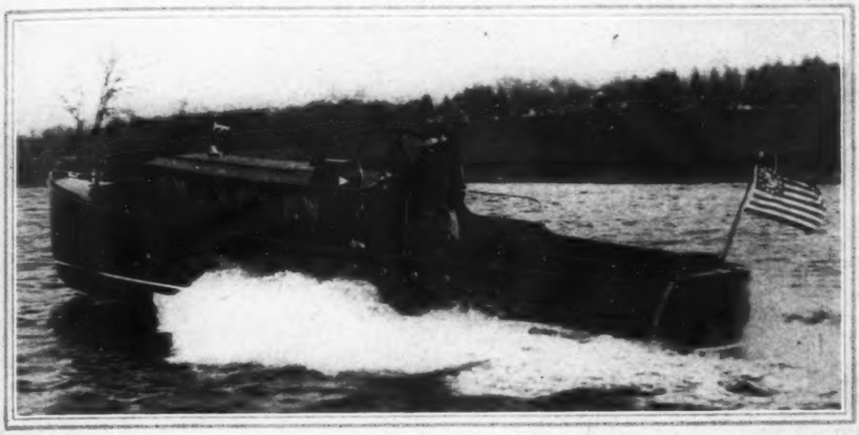
DRYPOINT

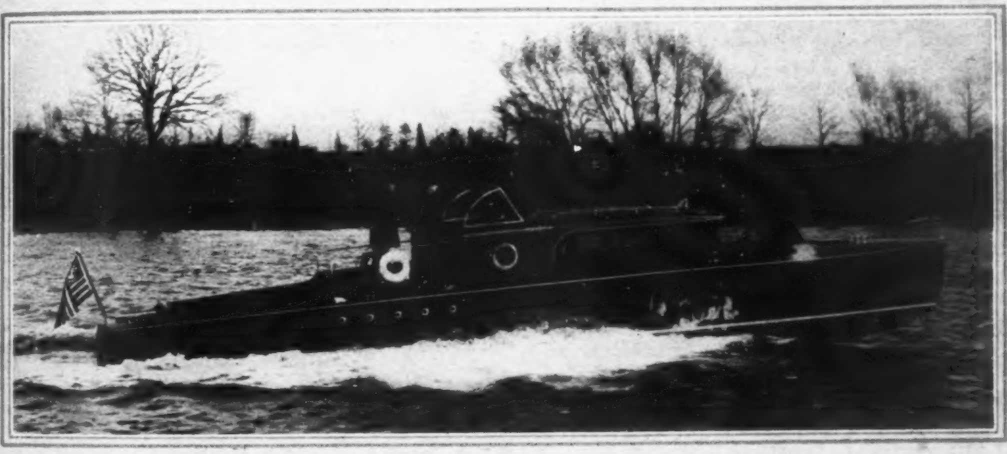
NEW YORK YACHT CLUB ANCHORAGE

Glen Cove, Long Island

THE SEAGULL COMMUTING CRUISERS

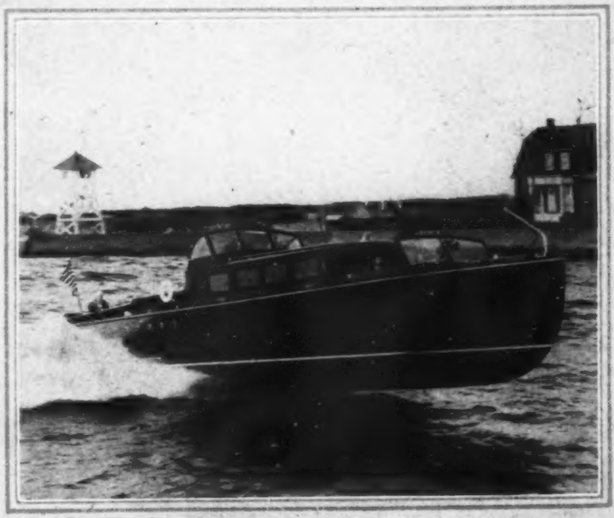
New Production of Smart Craft Emphasizes Speed, Perfect Accommodations and Finest Appearance





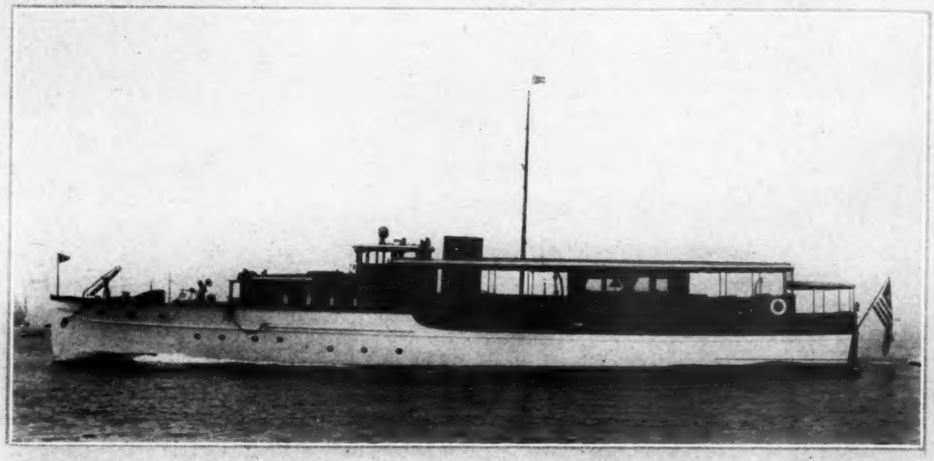
M. Rosenfeld

A new 40 foot Robinson Seagull speed cruiser powered with Hall-Scott L M 6 engine, speed 28 miles per hour. A fast boat that may be used for both commuting and cruising with full accommodations



A new 45 foot Robinson Seagull custom-commuter twin powered with Hall-Scott L M 6 motors. This particular boat was purchased by Knowlton L. Ames for use at Palm Beach

A new Robinson Seagull 30 foot forward open cockpit sedan cruiser optionally powered with Kermath, Hall-Scott and Sterling engines to give 30 to 32 miles per hour. It has sleeping accommodations for four, galley, toilet and large after cockpit



Colmena—a new 112-foot diesel yacht built for Jules S. Bache

Photograph by M. Rosenfeld

COLMENA A SPEEDY DIESEL YACHT

A Seaworthy Commuting Cruiser Recently Completed for Jules S. Bache of New York

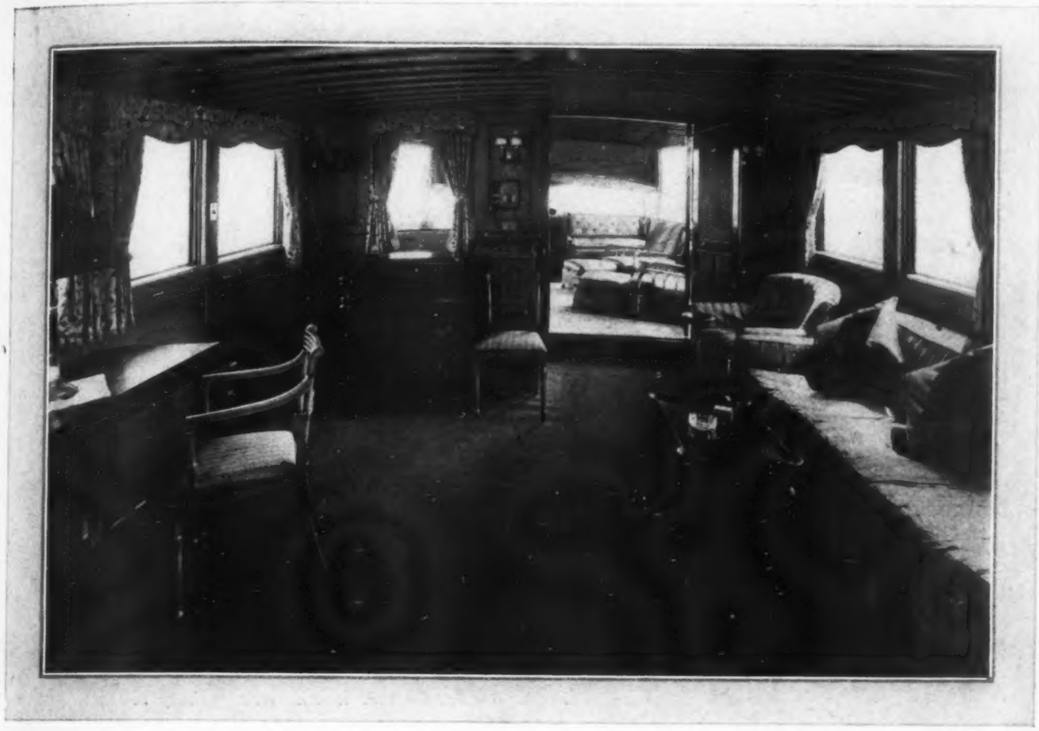
COLMENA, an attractive Winton diesel engined yacht of exceptional speed has recently been completed at the yard of Robert Jacob, Inc., City Island, New York, for Jules S. Bache from designs by John H. Wells, Inc. This new boat which is 112 feet in length with a beam of 17½ feet is a development or possibly an improvement of the design of the two very successful similar boats 106 feet in length. These are the sister ships Margaret F III and Lura M IV owned by L. P. Fisher and William A. Fisher, Detroit.

In the engine room are the two 300 h.p. airless injection Winton diesel engines

In this new boat which is somewhat longer than its forerunners the designer has succeeded in incorporating a measure of style, speed, comfort and seaworthiness which makes her one of the finest boats of her size afloat today. A feature of the hull construction is its bronze strapping which provides greater strength and rigidity. Double planking of cedar and quarter sawn fir together with four water tight bulkheads with those at each end of the engine space in steel, make a most substantial hull.

The finish throughout the outside of the boat is mahogany while this same material relieved by walnut and attractive enamels has been used in the interior. Quarters for the owner are naturally most important and include two double staterooms each with connecting bath, as well as two single staterooms with bath. The deck houses are arranged to provide for a dining saloon in the forward one and a large living room in the after one. A novel feature is the sunken deck forward which is provided with upholstered seats after the fashion of the cockpit in a smaller runabout. This is protected by a windshield and makes a most agreeable place when the boat is cruising. It can be covered over in bad weather and protected from rain.

Quarters for the crew are ample for the size of the boat and include two staterooms for the officers and forecastle quarters for from eight to ten men. The galley is conveniently located below the dining room and communicates with it by means of a

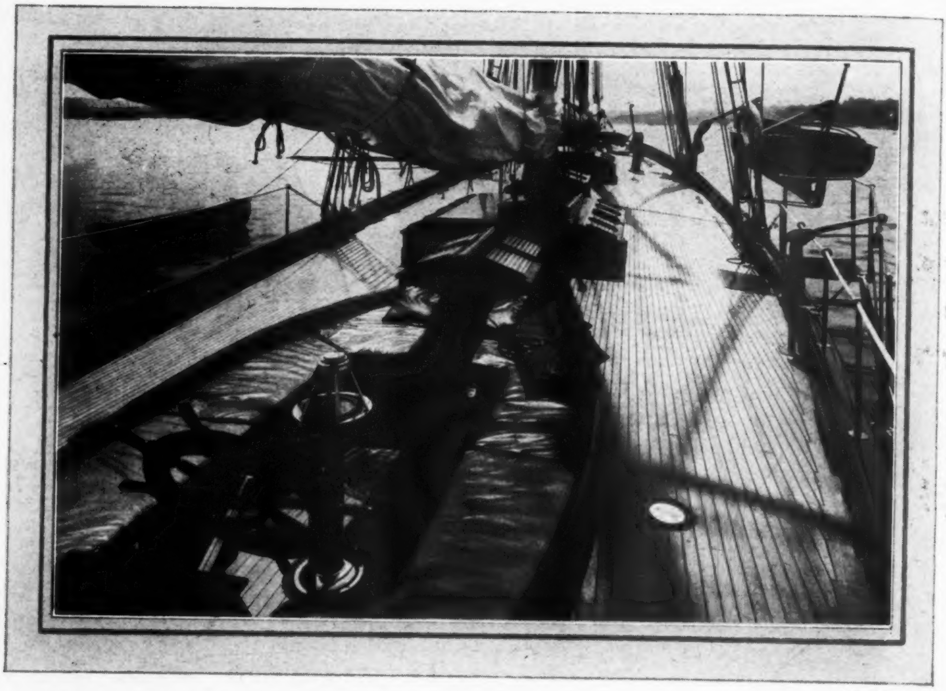


A novelty is the lounge in the after deckhouse adjacent to the open deck space

dumbwaiter and with the crews mess room forward.

The main engines comprise a pair of eight cylinder Winton diesel engines which develop 300 horsepower each. Two Winton generating sets and a battery of Exide storage cells supply electric current for lighting, refrigerating and auxiliaries. Galley and engine rooms are protected against fire by an automatic carbon dioxide gas fire control system.

A corner in the owner's stateroom featuring the novel decorative scheme and built-in furniture



M. Rosenfeld

The large deck expanse of Queen Tyi is unobstructed so that it will clear quickly in heavy weather

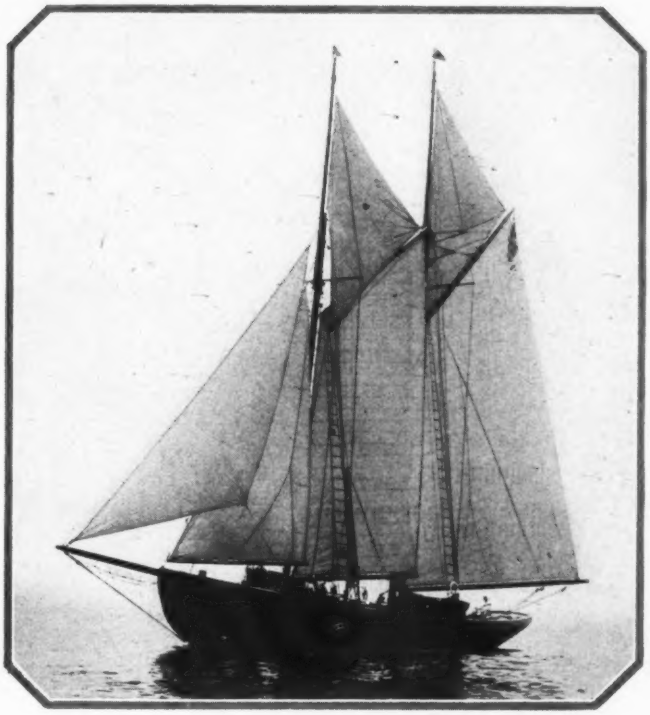
ARTHUR CRISP'S SCHOONER QUEEN TYI

An Able Offshore Cruising Yacht With Powerful Diesel Equipment of the Deep Sea Fisherman Type

Queen Tyi's main engine is a four cylinder Standard diesel with a 6 by 8 inch bore and stroke developing 60 h.p.

MANY modern yachtsmen have a pronounced preference for boating out on the ocean where the water is deep and blue and the big fish can be found in abundance. Queen Tyi is a new auxiliary schooner which was built for Arthur Crisp, a New York yachtsman whose boating preferences run this way. She is an able 78-foot schooner yacht, designed by John G. Alden, Boston naval architect, and was built at the yard of C. A. Morse & Son of Thomaston, Maine, experienced builders of this type of craft. She is defined as a semi-fisherman type with gaff rig on both fore and main masts and is a real seagoing ship in every respect. The more complete dimensions of this boat are a length on the water line of 61 feet 9 inches, while the overall length is considerably greater, being 78 feet 5 inches. The beam overall is 18 feet and the draft under normal cruising conditions is 10 feet 2 inches. She carries a heavy load of ballast which is divided with 24,000 lbs. distributed in the interior of the hull and 25,000 lbs. attached to the keel.

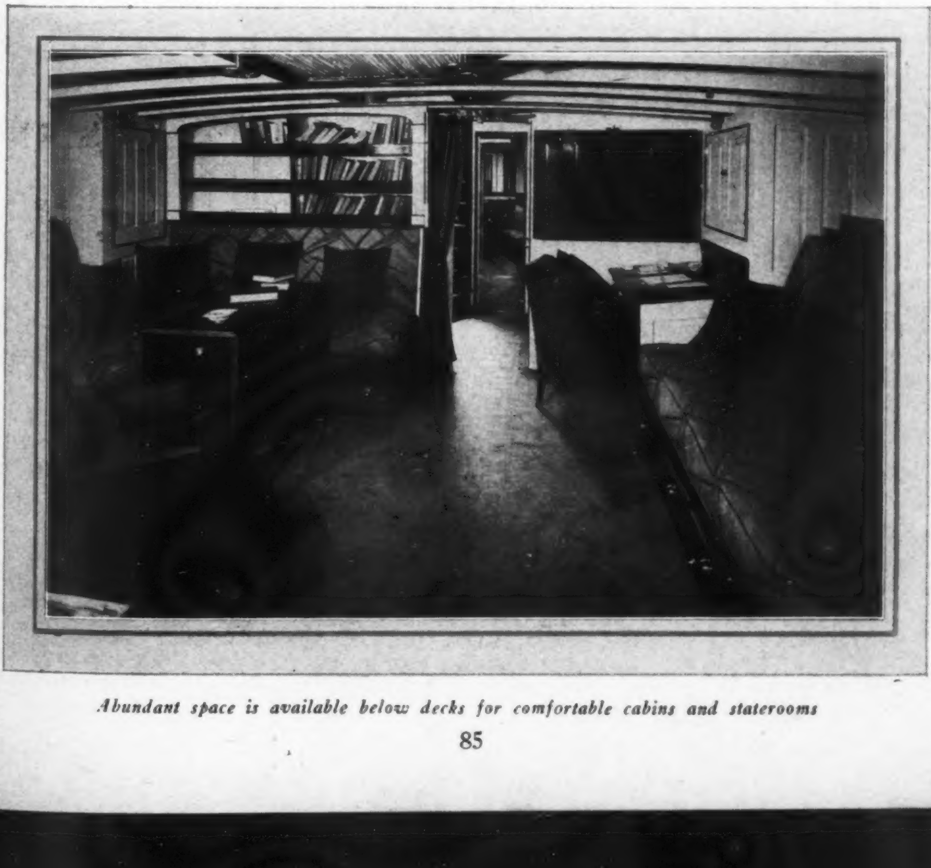
The usual commercial or fishing schooner of this type has its space below decks arranged to carry a useful cargo and when a boat of this kind is intended for yachting service this requirement naturally does not exist. The ample spaces below decks can be used for most excellent accommo-



The lines of the offshore fisherman have been adapted to yacht service in Queen Tyi

dations such as roomy saloons and staterooms for owner and his guests, and Queen Tyi has been provided with two double staterooms and one single stateroom. In addition the cabin space can be used for extra guests to the number of four, making a total sleeping accommodation for nine persons in the owner's party. In addition berths are provided in the forecastle for four members of the crew.

The auxiliary motive power on this boat is a four-cylinder heavy-duty Standard Diesel engine. This develops a maximum of about 60 horsepower and is of the six-inch bore and eight-inch stroke size. Queen Tyi carries a full equipment of auxiliary electrical machinery, power for which is provided by a 2 k.w. Bolinders Diesel engine generating set with storage batteries to carry the lighting load. An American Engineering Company electric windlass and sail hoist helps the crew, and a Lux fire extinguishing system protects the boat against this hazard. Small motor-driven tenders are carried for the convenience of owner and crew.



Abundant space is available below decks for comfortable cabins and staterooms

M. Rosenfeld

The forward portion of the deckhouse is used for the dining room with direct access to the galley below

JUNALUSKA, AN ABLE NINETY-FOOTER

A Houseboat Cruiser Type of Exceptional Ability

Built for George C. Heck of New York

WHAT is perhaps one of the most successful boats delivered to its owner during the 1929 season is the seagoing diesel yacht Junaluska, designed and built by the New York Yacht, Launch and Engine Company for George C. Heck of New York.

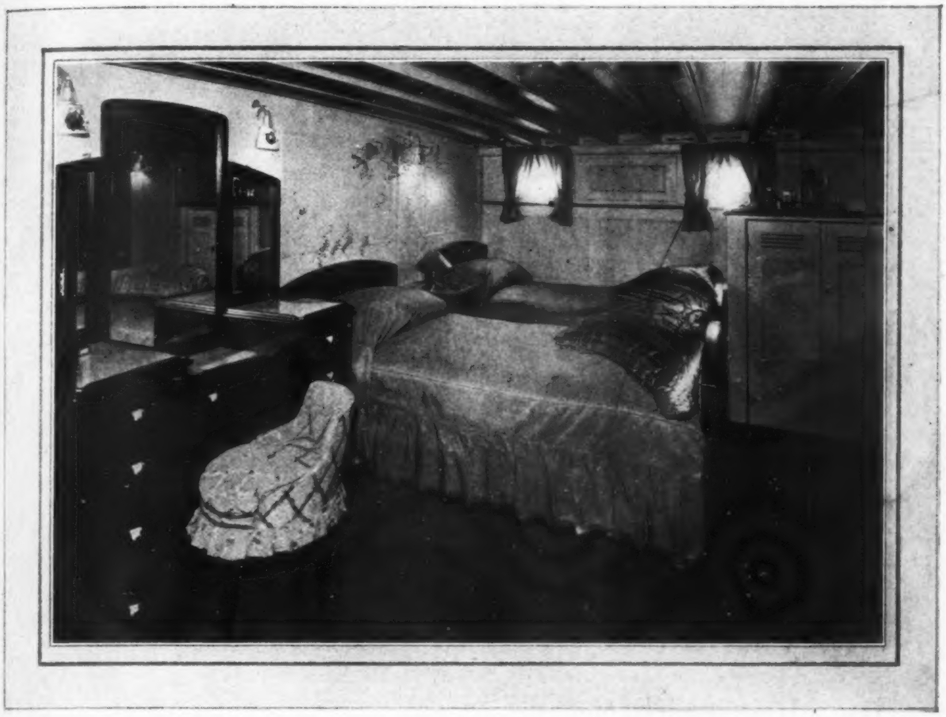
The builders have long maintained a reputation for their cooperation with owners in designing yachts which embody all their individual ideas as to the arrangement and accommodations, as well as being decorated and appointed in perfect harmony with their particular tastes. In this way the owner's individuality is expressed in the development of his boat.

At the same time, the builders adhere rigidly to a construction policy which tolerates no deviation from sound, staunch workmanship, coupled with a design calculated to give the finished craft seagoing qualities that can be depended upon under all circumstances. The result is invariably a splendid specimen of the boatbuilder's art.

Down in the engine room are two Winton diesel engines of 200 h.p. each

Junaluska is a good example of this better craftsmanship. In her case, particular stress was laid upon unusually heavy construction in deckhouses and hull, in order to make her as able and seaworthy as possible within the limits of her dimensions. Over all she measures 90 feet in length, on a waterline length of 84 feet. Her beam is 18 feet and the draft 5 feet. Keel and timbers are of oak, keelson yellow pine, planking fir, and decks and deckhouses are of teak. All other exterior finish is also of teak.

Below decks, cabins are

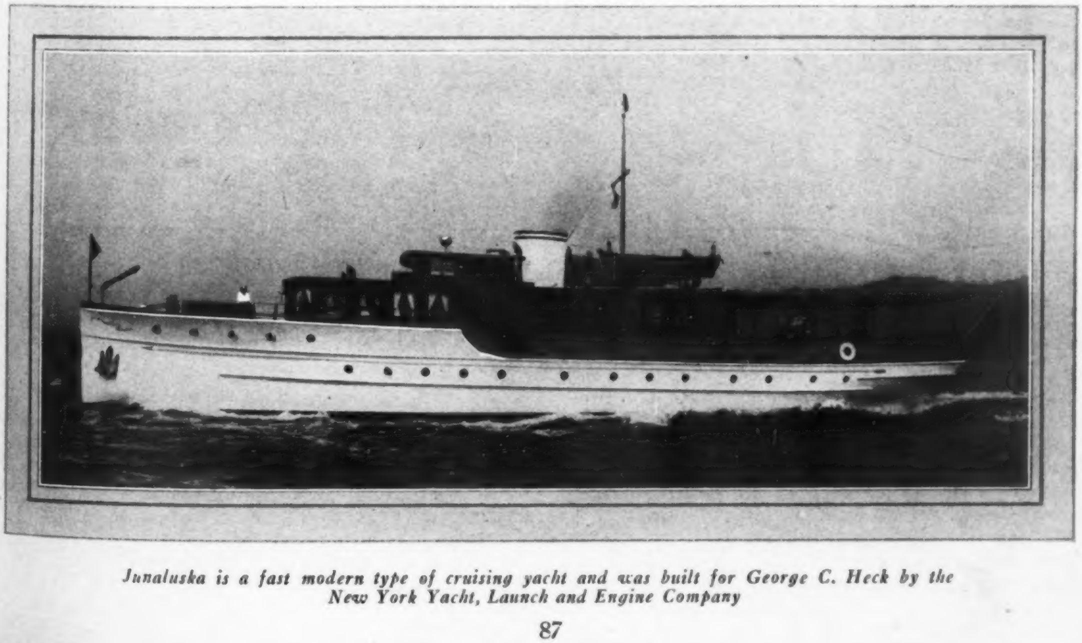


The owner's stateroom occupies the full width of the ship and is finished in enamel with mahogany furniture

finished in cream ivory with mahogany trim. Mahogany, in natural finish, is used for the interior of the big deckhouse at one end of which there is located an electric fireplace. The dining saloon, located in the deckhouse forward, is decorated in an attractive manner and is furnished with a large buffet and sideboard which give ample room for silverware and china. The interior of the owner's quarters below are finished in enamel, with furniture of mahogany.

While speed was not a primary consideration, the two big model 138 Winton diesel engines supply abundant power for a cruising speed of 14 miles per hour. These engines are six-cylindered machines of the solid injection type developing 200 horsepower each and have already driven Junaluska close to 15 m.p.h.

Equipment throughout the yacht is complete to the last detail. To mention but a few of the items, there is a Frigidaire ice box, 10 k. w. Winton generator, Decatur water pressure system, Shipmate gas range and Arcola hot water heating plant. American Engineering Company electric auxiliary equipment on deck lightens the task of handling small boats and anchors.



Junaluska is a fast modern type of cruising yacht and was built for George C. Heck by the New York Yacht, Launch and Engine Company

An interesting corner in Robador's dining room. This room is attractively paneled in American walnut with furniture to match

COMMODORE LAW'S NEW ROBADOR

Flagship of the Indian Harbor Yacht Club a Beautiful Stream Lined Cruising Vessel of Unusual Type

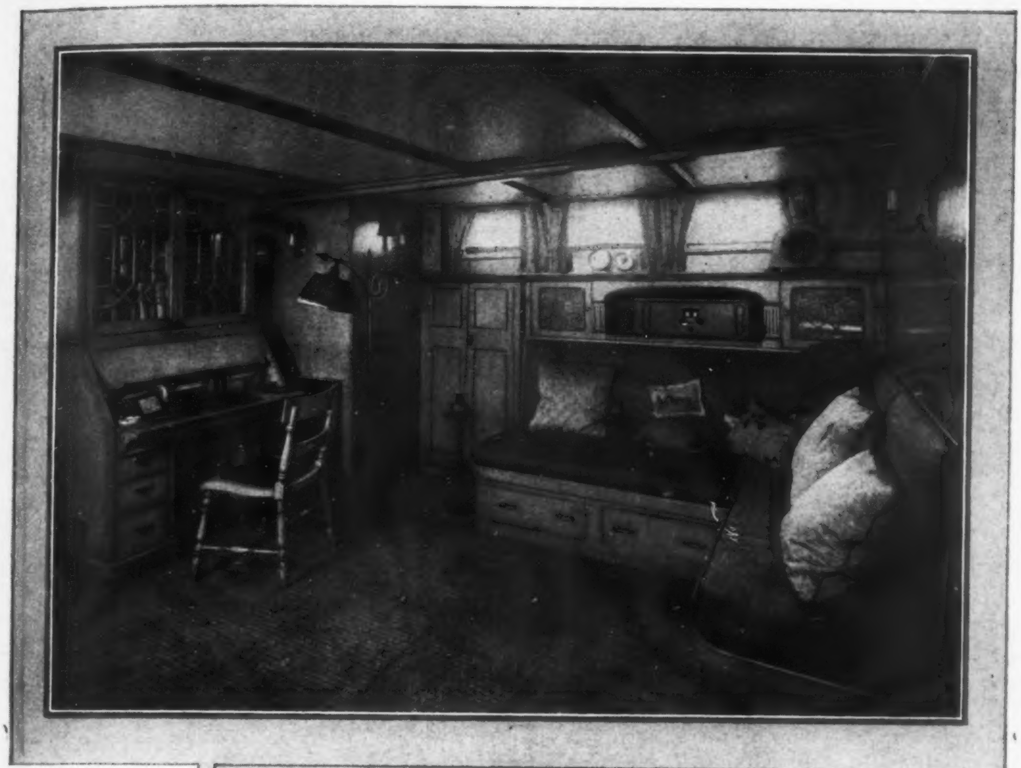
THE new cruiser Robador is the third boat of the same name to be built for Commodore Robert Law of the Indian Harbor Yacht Club. The newest of this line is a 105 foot ship arranged with a well stream lined hull and built on a modified vee bottom design. In this she departs greatly from orthodox boats of such large size. She is considered to be the largest vee bottom type boat afloat. A thorough testing over the past summer season has been most convincing as to her stability, seaworthiness and speed. Unquestionably the boat is faster than a round bottom boat of similar power and displacement.

The new Robador is powered with a pair of 700 horsepower special vee type Winton gasoline engines. These have a bore and stroke of 7½ x 8½ inches and are beautiful pieces of machinery which have functioned perfectly. They develop full power at 1,300 revolutions and on trials the boat has attained a speed of 24½ miles. A cruising speed of from 18 to 20 knots is maintained, the difference being due to whether or not the fuel tanks which carry nine tons of fuel are empty or full.

The builders and designers, the Luders Marine Construction Company, Stamford, have developed this stream line type which has a most pleasing appearance on the water. The shape of the hull throws spray well away from the boat so that it is drier than most boats would be, driven at the same speed. A feature of the boat is its roominess and interior ventilation.

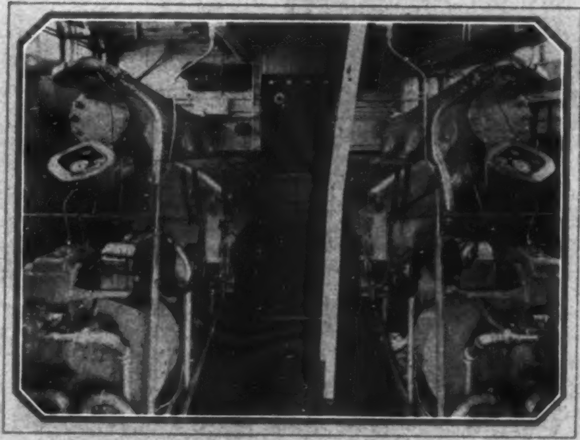
The dining room is provided with very large windows from which a clear view can be had even when seated at the table. Forward of the dining room and convenient also to the crews quarters is a large well ventilated galley. The deck house contains the wheel, entrance to the engine room, captain's room and replaces the usual deck social hall. There are provided also sleeping quarters on deck for the owner. These rooms are pleasantly finished in teak with day beds and comfortable furniture in the sitting room style. The social hall is in the trunk house with its main entrance from the after cockpit. This is finished in peach color and green and equipped with a marvelous piano combination consisting of a combined piano, desk and bookcase. Quarters below consist of three single staterooms and one double stateroom as well as two bath rooms.

The engine room amidships is separated from the rest of the boat by steel bulkheads. In fact, the numerous structural partitions and watertight bulkheads make an extremely rigid vessel. Besides the main engines the machinery installation includes Winton electric generating sets, pumps of various kinds and other auxiliaries. A hot water heating system and hot and cold running water are provided throughout to keep the boat comfortable. Three separate Frigidaire units take care of proper food storage and only seven men are required to handle and service this wonderful ship.



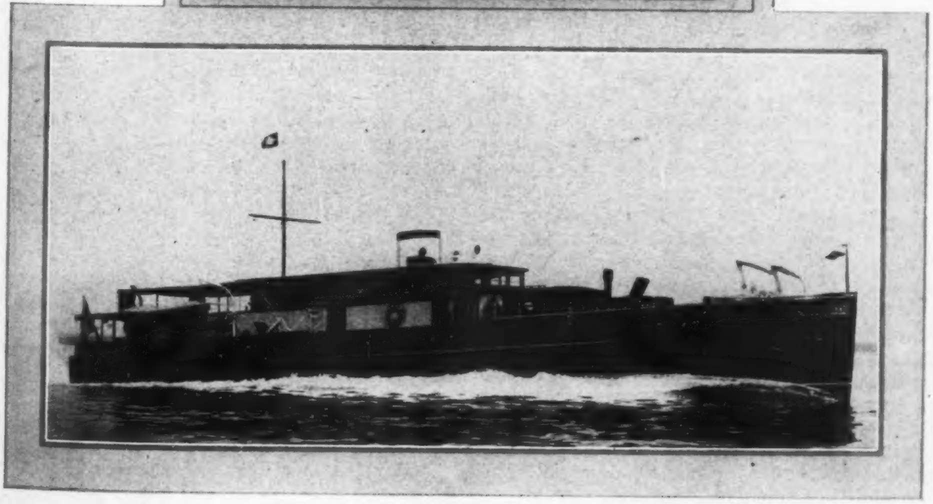
E. Levick, Inc.

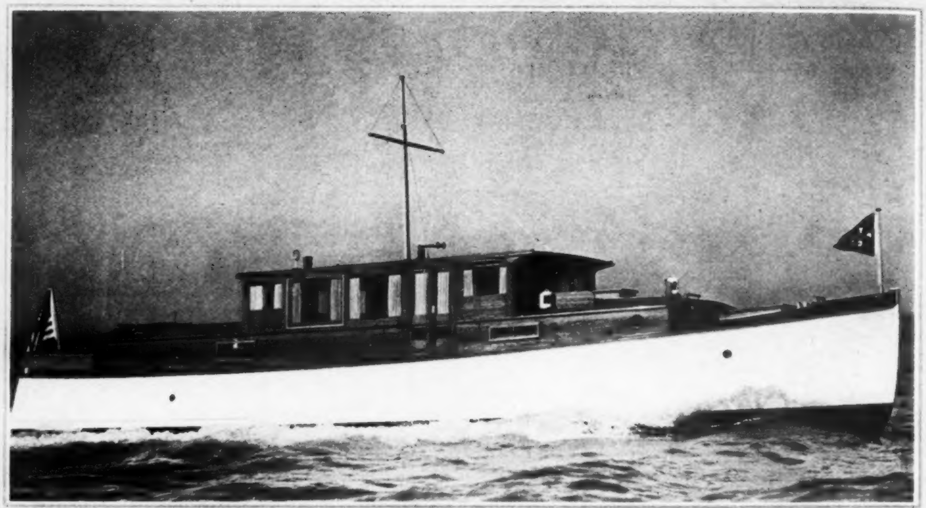
The social hall is in the trunk house and is finished peach and green



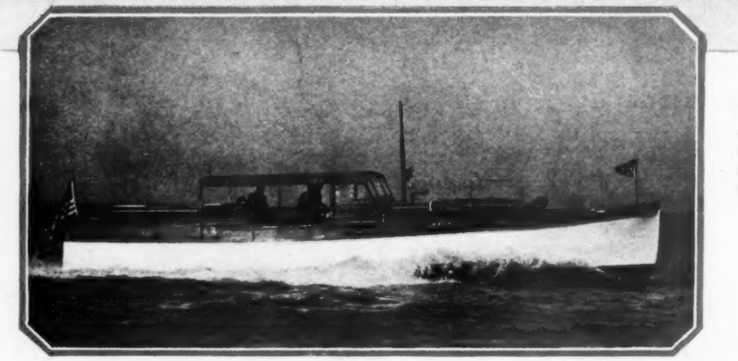
Robador, 105 feet long, is deceptive as to her speed. She can slip along at 24 miles without seeming to be so fast

Two vee type 12 cylinder Winton gasoline engines of a late type developing 700 h.p. each are used to drive Robador. Accessory engines are also Winton units





The Matthews 46 double cabin with enclosed bridge, good for 17 miles with Kermath 150



The DeLuxe 46 double cabin sport cruiser is an exceedingly smart addition to the Matthews group

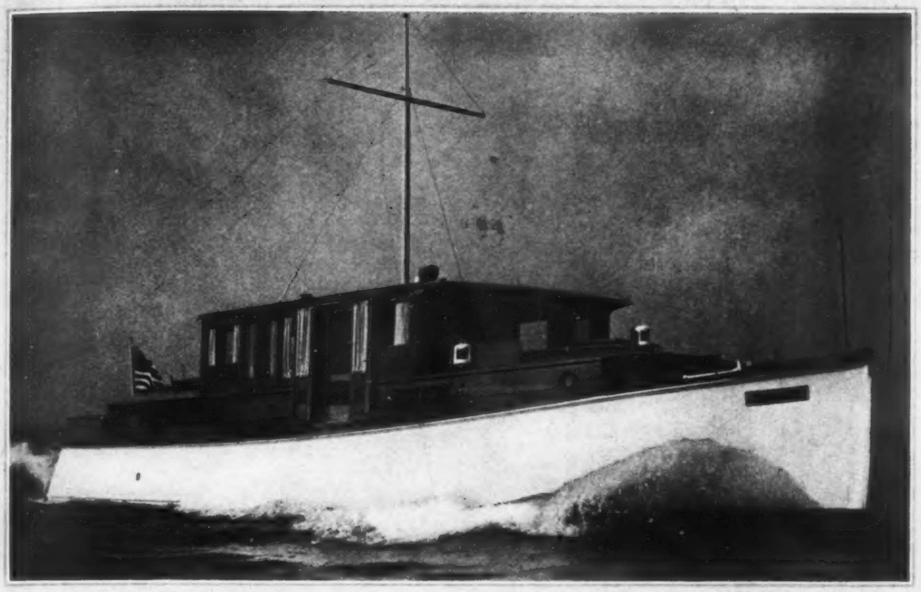
BOAT PRODUCTION INCREASED

Greater Plant Capacity Required by Increased Business Allows the Matthews Company to Turn Out Five Boats Per Week

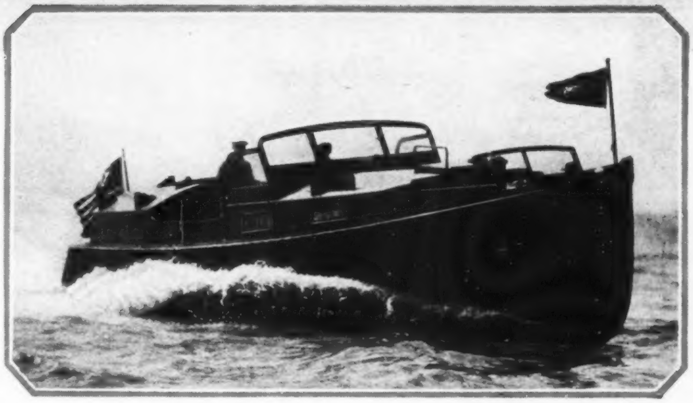
BUSINESS as usual, only very much more so, is the watchword of the Matthews Company, builders of luxurious cruising yachts and high-speed cruisers. New orders are coming in at a rate which even exceeds the company officials' fondest expectations. The addition to the company's plant at Port Clinton, O., which was begun in the spring of last year was completed and put into use in mid-October. With this addition the number of boats in process of construction at one time immediately increased from twenty-seven to thirty-five. At the present rate of construction this means an average of slightly less than five boats completed every week, but as production smoothes out it is hoped that the average of five will be attained, giving the company a production this year of 250 boats.

At about the time last fall when increased building capacity was assured, a slight unpleasantness in the stock market threatened to rock the financial structures of the nation. Gloomy prophets foretold that the buying power of the people would be curtailed and that business would suffer a consequent setback. Whereupon C. M. Isenhower, the genial sales manager of the Matthews Company, underwent a few reflective moments. It was all right for the plant to increase its production twenty-five per cent—but what price selling the increased production to people who had been ruined in the stock market?

Fortunately, the last few weeks have seemed to show that the unlucky souls who speculate in stocks are not the lucky ones who invest in Matthews boats. That is to say, since the financial panic only one order for a boat has been canceled, while all but one of the company's many distributors have turned in larger fall orders for new boats than ever before. When the depression was at its worst one of the smaller distributors who had previously handled only eight to ten boats a year presented himself with actual orders for



A smaller 38 double cabin Matthews with enclosed bridge deck is a complete home



Similar DeLuxe 38 sport cruiser, a new model with many refinements in detail and finish

fifteen and expressed the hope that the company would not be too busy to give him the five additional boats which he expects to order during the coming season.

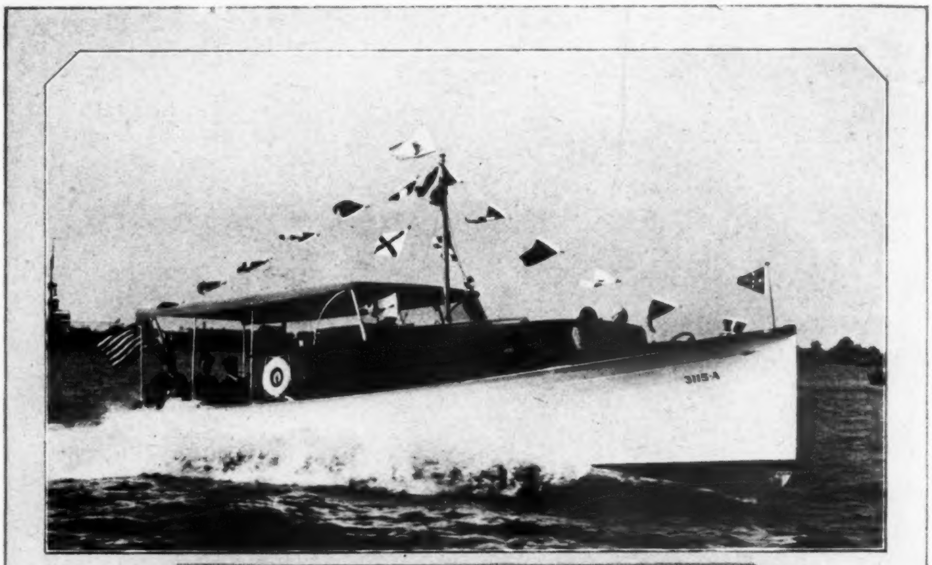
There are, of course, very substantial reasons why boatmen should wish to invest in Matthews cruisers. The 1930 series, announced in September, was planned with a view to showing not only that the Matthews Company was giving honest-to-goodness value for every dollar charged, but that it could even lean over a little backwards in its determination to build better boats at as little money as good business policy permitted.

Improvements have been effected throughout the complete set-up of models. While, for instance, the running lines themselves have been left unchanged because of having proved satisfactory in the past, the boats above the running lines and in the forward sections have been filled out slightly to give better seaworthiness at high speeds. This improvement has been made because in the last year numerous purchasers stipulated large power plants to drive the boats at higher speeds. Filling out the bow sections. increasing the freeboard, and so on, better adapts the new models to this service.

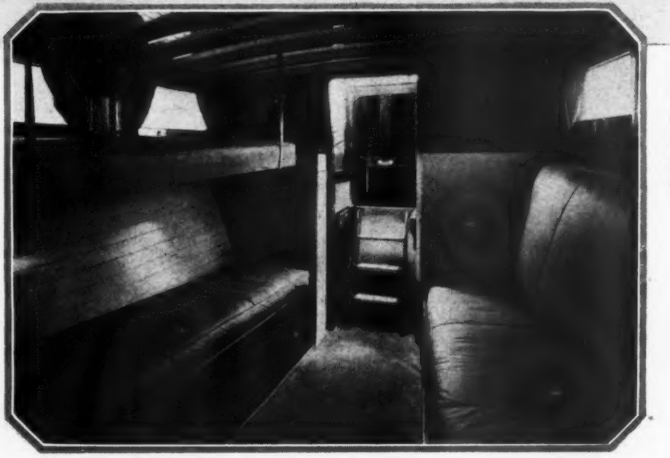
Having brought seaworthiness and comfort to a satisfactory state, the company is now turning its attention to making its models appeal more to the eye. In this direction a finer and higher-priced upholstery has been selected as standard material, while the instrument panel that has been added to the binnacle stand is of the indirect lighting type and is as decorative as those on the finer automobiles. Smoother layouts and better finishes have been worked out, and the galley has been improved by the addition of the Willis type of alcohol stove.

In addition to two new models which have been added for 1930 there have been two important changes in the Matthews line. The first of these is the discontinuance of the 32-foot speed cruiser. This model was dropped not because of any decrease of popularity, but for the opposite reason. The 32-footer was an odd size. Whereas the 38 and the 46 are very much the same as to hulls, and employ the same bulkheads and furniture, upholstery, ice box units, galley shelving, and the like, the 32 had a different beam and character of layout and did not permit the use of a single feature of the 38 and 46. As a result the production of the 38 and 46, which are the leaders of the Matthews line, was sadly interrupted, and

(*Continued on page* 182)



A model 202 Scripps motor of 200 horsepower drives the new Corsair cruiser at a speed of twenty-two to twenty-four miles per hour



Looking forward in the roomy cabin. Generous accommodations are found here for a party of four, with abundant locker and storage space

M. Rosenfeld

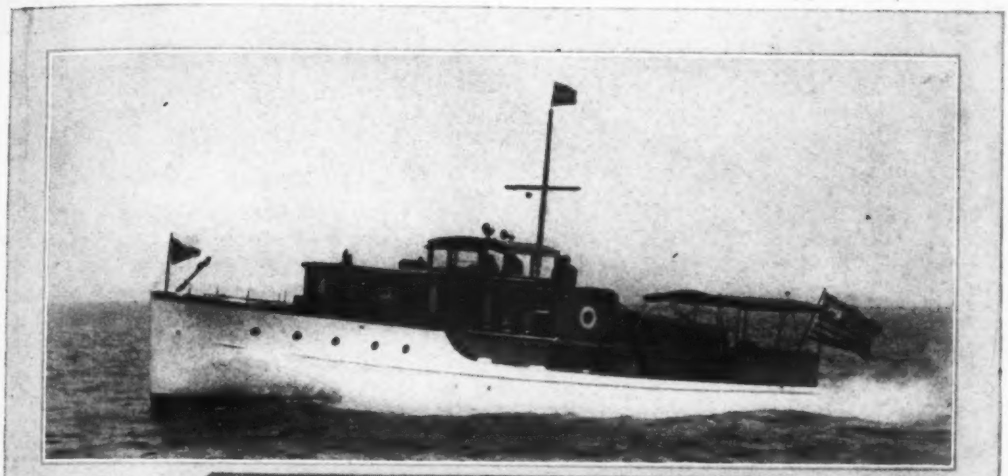
A BIGGER CORSAIR—THE 36-FOOT CRUISER

The Corsair Boat Company, Manufacturers of the Popular Cruisader, Now Present the Thirty-Six, a Larger and Even Finer Craft

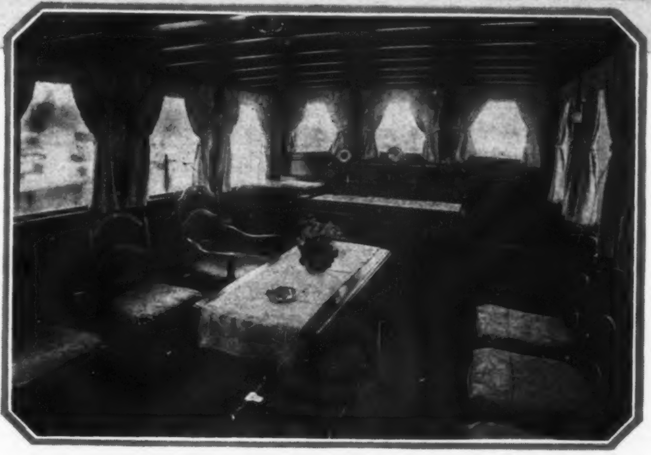
ANOTHER handsome cruising model now comes to join the ranks of standardized craft, with the announcement by the Corsair Boat Company of Detroit and Trenton, Michigan, of a trunk-cabin cruiser, generally similar to their well-known Cruisader in design and appearance, but on a larger and more elaborate scale. The Cruisader model, of course, will be continued, while the Thirty-Six will meet the requirements of those who wish Corsair performance, quality and refinements in a bigger craft with more spacious and luxurious accommodations.

The new Thirty-Six is a fleet and graceful craft, with a beam of 9 feet 10 inches and a 2-foot 9-inch draft. The added six feet of length have enabled the designers to secure finer lines, with extra roominess in the cabins, and more luxurious cockpits both fore and aft, as well as correspondingly greater comfort. As a fitting power plant for the new hull, the model 202 Scripps of 200 horsepower has been chosen to deliver a smooth and dependable flow of power with speeds as high as 24 miles per hour.

Runabout flexibility, speed and control are combined with cruiser comfort and accommodations in one well-proportioned hull. Facilities and conveniences are offered, usually associated only with much larger craft. A roomy forward cockpit provides an excellent place in which several persons may ride, with dual steering control carried to this point from the after cockpit. A multitude of small refinements have been provided to assure the owner of a maximum of comfort, convenience and safety. An enclosed galley is arranged with an ice box that is filled from the outside and the copper gasoline tanks are filled through the covering boards by means of a specially designed filler cap located outside the cockpit, adding immeasurably to the ease, safety and cleanliness of fueling. No detail has been overlooked which might contribute to improved performance or greater satisfaction.



Bess Emily's pair of eight-cylindered Sterling Dolphin engines give her a speed of 20 miles per hour



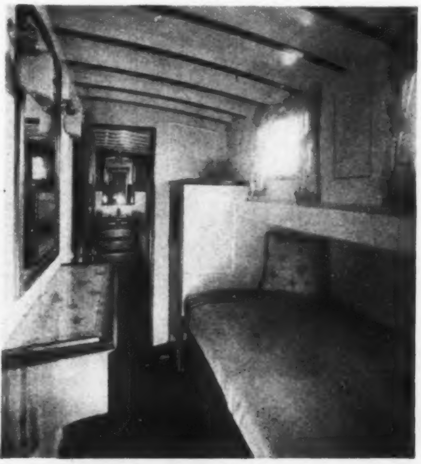
The deckhouse dining saloon and living room is a pleasant place, with unobstructed view forward and on either side

BESS EMILY II—A CHEERFUL CRUISER

Exceptional Roominess and Comfort are Provided in Ole Evinrude's Standardized 62-Foot Great Lakes Cruiser

IT is quite a tribute to the 62-foot Sunbeam cruiser, standardized product of the Great Lakes Boat Building Corporation of Chicago, that it should be selected by Ole Evinrude of Milwaukee in his choice of a new yacht. Mr. Evinrude's Sunbeam has been christened Bess Emily II.

Roominess and comfort are features of these popular cruisers, every possible comfort and convenience being provided for extended cruising, without sacrifice of abundant deck space for large afternoon or evening parties. The Sunbeam's overall length is 62 feet 10 inches, beam 13 feet 8 inches, and draft 4 feet.



A good idea of the generous proportions and arrangement of staterooms

In addition to the roomy after deck there is a pleasant sun deck just aft of the sheltered navigating bridge. The deckhouse dining saloon and living room provide cheerful indoor space. There is also a convenient companionway to the staterooms from the after deck. There are three of these staterooms with bath, two toilets and generous locker space. Forward of the engine room are the galley and crew's quarters.

Bess Emily's power plant consists of a pair of 8-cylindered Sterling Dolphins which give her a speed of 20 m.p.h. Every convenience is provided, including generating plants, mechanical refrigeration, hot and cold running water, electric pumps and windlass.

SPEEDY CRUISERS FOR EVERY DAY SERVICE

An Extensive Series of Cruising Craft Built by the American Car

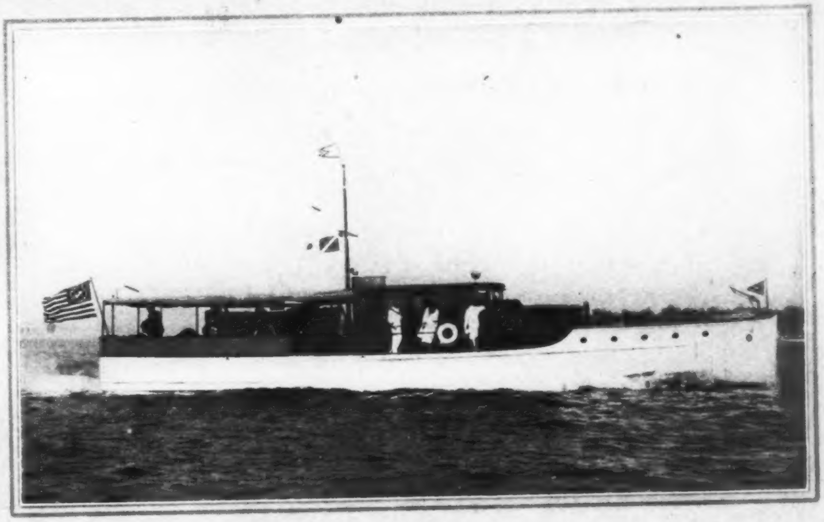
Evaness, an A. C. F. 54 foot twin screw motor yacht owned by Joseph Haft of Flushing, L. I. This boat carries two 175 h.p. reduction gear engines with a speed of 18 miles. Two staterooms accommodate three persons each with extra berths in deckhouse and saloon. Also quarters for a crew of two

This 40 foot double cabin A. C. F. cruiser is owned by John G. Dentz of New York. She carries a 100 h.p. Hall Scott reduction gear engine and has sleeping accommodations for five. Her speed is 14 miles per hour

Hornpipe is a 30 foot double cabin cruiser owned by J. C. Truesdell of Glen Cove. This boat is powered with a Gray six-72 which produces 12 miles speed. She is arranged to sleep six

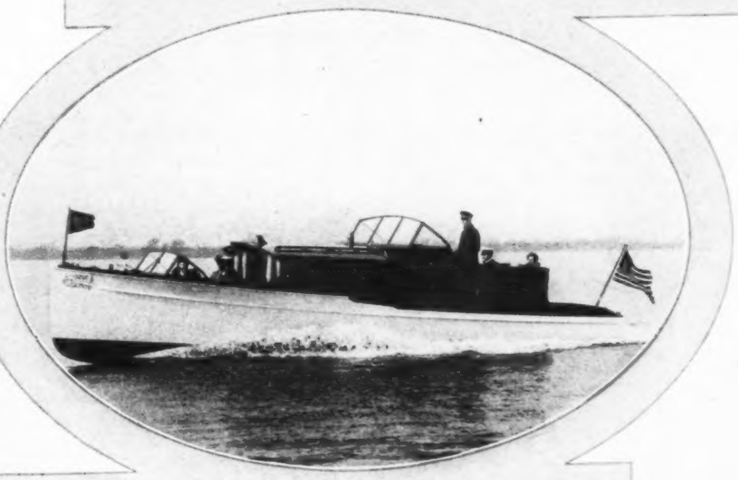
ACCOMMODATE THE ENTIRE FAMILY

and Foundry Company to Suit Needs of Boat Minded Populace

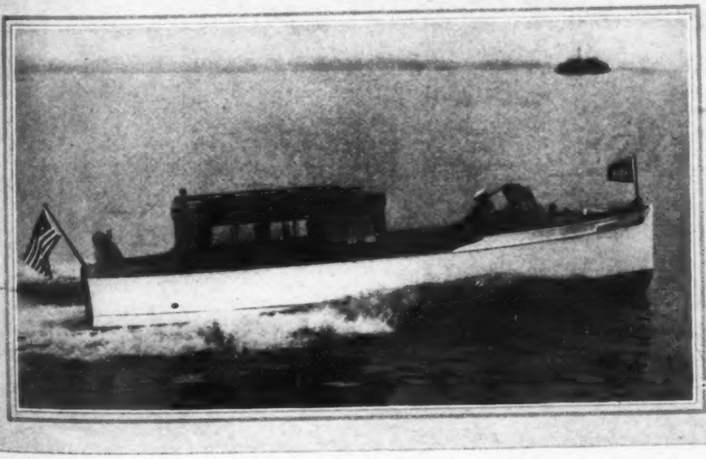


The large 68 foot A. C. F. twin screw motor yacht which is powered with two 175 h.p. Hall Scott reduction gear engines has a speed of 18 miles. She has three staterooms to accommodate two persons each with additional quarters for four in the saloon as well as a crew

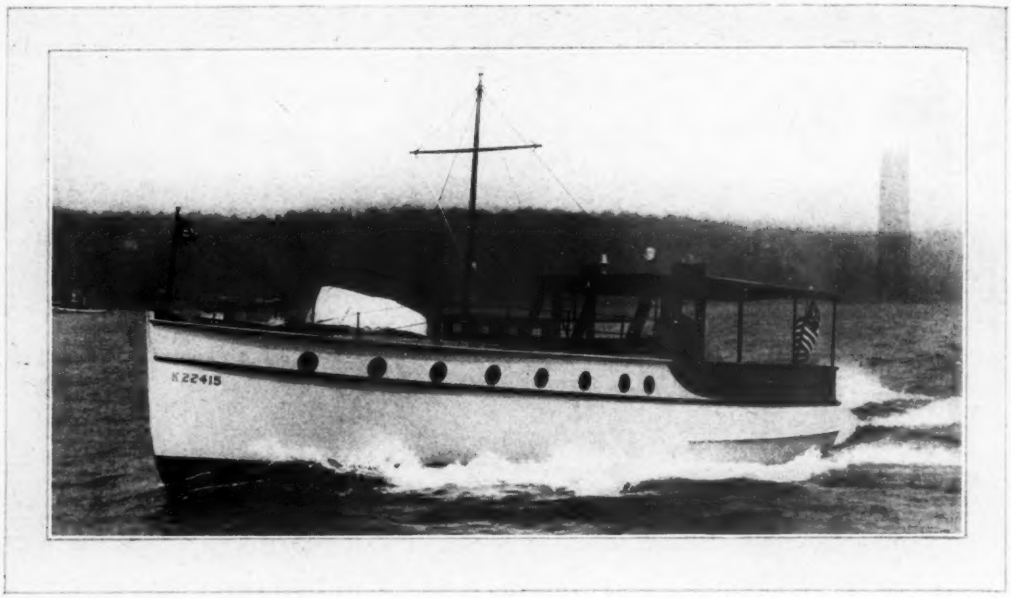
Photographs by
M. Rosenfeld



A fast 38 foot A. C. F. Sport cruiser. This boat carries two Gray 110 h.p. engines which drive her at better than 26 miles. Upper and lower berths in the cabin will accommodate four persons nicely



The newest 30 foot A.C.F. cruising runabout. This boat is powered with a single Gray 8 cylinder engine of 110 h.p. which gives it a speed of 22 miles per hour. Sleeping accommodations are arranged for two in the cabin with two additional extra berths in the cockpit



The new cruiser looks big and able with her 14-mile speed

Photograph by M. Rosenfeld

THE LONG ISLAND FORTY

A Newcomer Among the Standardized Cruisers Built In Substantial Shape by Long Island Shipyard

THE Long Island Shipyard, Inc., of Port Jefferson, N. Y., has entered the field of standardized construction with a well worked-out 40-foot cruiser.

Within the limits of 40 feet 6 inches length, 10 feet 6 inches beam and 3 feet draft, accommodations have been provided for an owner's party of six and crew of one. Aft of the forepeak is a two-berth stateroom, followed by toilet to port and full-height lockers to starboard. The main cabin, with conventional upper and lower berths, affords room for a large folding dining table. A short trunk house gives full headroom over the engine, galley and crew's berth. The galley is larger than usual in a boat of this size, having ample working space and being ventilated both by ports and large windows. The power plant, a six-cylinder Buda of 115 h.p., gives a speed of about 14 miles per hour.

A striking feature of the design is the unusual amount of livable deck space. The forward deck extends from stemhead to steering-shelter, broken only by a low flat-topped skylight, upholstered to serve as a seat. The after deck, surrounded by a low bulwark capped by a ship-type rail, is 13 feet 6 inches long.

The development of the designs of the Long Island Forty was begun a year ago; the test-model, produced last summer, was given her trials in long runs up and down the coast under all weather conditions, and production is now under way for the season of 1930.

An exceptional cockpit allows many chairs for the owner's comfort

The forward one of the staterooms is provided with two generous berths

Photograph by M. Rosenfeld

The standard 45-foot Dawn cruiser, powered with two Lathrop engines does 14 miles

SPEEDY 45 AND 48 FOOT CRUISERS

The Dawn Boat Corporation Enlarges Production and Introduces a Larger and Faster Boat to Its Friends for 1930

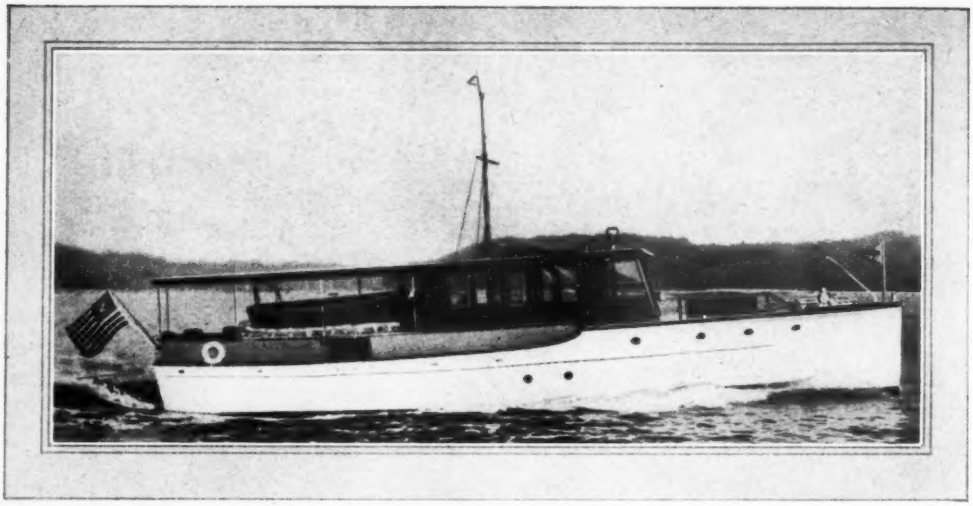
SPECIALIZING in standardized cruisers in larger sizes, the Dawn Boat Corporation of New York will introduce a new 48-foot express cruiser this year. This will be a slightly larger companion to the well known 45-foot cruiser. The addition of only a few feet in the length has permitted the construction of a much more commodious and faster boat. It is arranged with sleeping accommodations for six persons and has two separate staterooms, each with its own lavatory. Quarters for a two-man crew are also provided.

A feature is the enclosed deck house which in effect provides an additional sitting room on deck. The galley is large and uses a three-burner stove with oven and broiler. Hot and cold running water throughout the boat is arranged for. A separate 32-volt generating set provides an abundance of power for all the lighting requirements of the boat. Current for a radio set is also supplied.

Structurally the boats are most substantial, since the keel is a single piece of oak 44 feet in length. The frames are also of oak while the planking is of white cedar, copper fastened.

The men behind the company: Edward Hehre, Pres., Norman E. Donnelly, Treasurer, and C. B. Nelson, Vice Pres.

A new 48-foot Dawn cruiser. Powered with two Sterling Petrels it will do up to 22 miles



The 50-foot twin screw Elco yacht will be built during 1930 in practically the same form as before

IMPROVEMENTS IN CRUISING CRAFT

This New Series of Elco Boats for 1930 Show Two Distinctly New Craft and Many Marked Changes in Previous Models

TWO new models are featured in the 1930 Elco fleet as that organization begins its 38th year in the motor boat industry. One of these, a 27-foot cabin cruiser, replaces the 26-footer of last year, while the other is an enlarged and improved edition of the already famous Cruisette, measuring 35 feet over all.

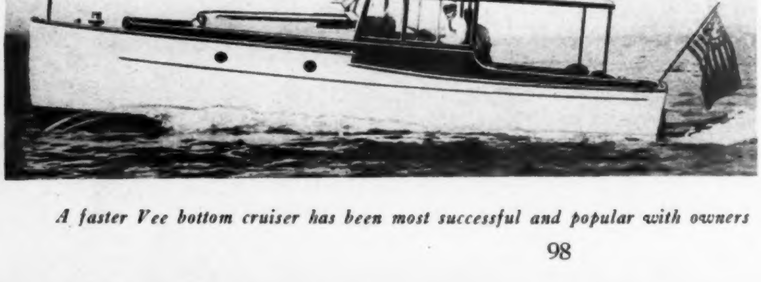
The new Cruisette is designed to provide the purchaser with a boat he can own, operate and care for without the assistance of professional help and at a minimum cost. Powered by an Elco Buda six-cylinder engine of 130 horsepower, this new model has a cruising speed of from 14 to 15 miles an hour. Emphasis throughout has been placed on comfort, seaworthiness and attractive lines. As the average owner-operated boat is used to a great extent for day service, special attention has been given to comfortable cockpit space. A forward cockpit seating four persons and accessible from the cabin is provided in addition.

The steering position on the new Cruisette is completely enclosed with two comfortable seats each of which accommodates two persons. These are separated by a center line passageway and are raised to permit full vision ahead. The steering wheel and controls, of the runabout type, together with all instruments and a large chart board are placed on the port side. Locker space, drawers for tools and storage of the folding table is provided as part of the seat structure. The windshield arrangement consists of two rain vision sections across the forward end with sliding windows at the sides. This permits the operator to open the steering position almost completely in fair weather and to enclose it without effort.

The main cockpit is located aft of the steering position, a short section of which is left entirely open for ease in getting aboard, fishing and chair space. Both the steering position and the rest of the cockpit are covered by a permanent awning.

One of the most unique features in the entire 1930 Elco fleet is the convertible cockpit embodied in the Cruisette and representing a distinct advance in deck arrangements for small boats. The protection and comfort of a completely enclosed deck house is possible, while at the same time the owner can enjoy an open cockpit when desired. Two sets of panels are provided, one of which is made of screening and the other solid. These may be lifted in and out of place with ease.

The main cabin retains the essential features of last year's model; refinements in arrangement and equipment, however, have increased its roominess and convenience. Upper and lower berths provide sleeping accommodations for four. Altogether six persons can sleep comfortably on the craft by utilizing the two side seats in the cockpit which pull out to form berths.

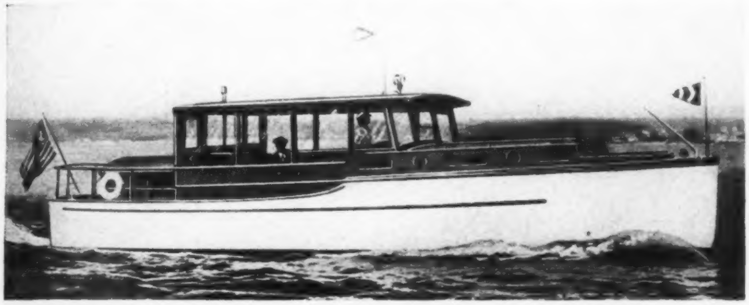


A faster Vee bottom cruiser has been most successful and popular with owners

The well known cruisette will be 35-feet long in 1930 and fitted with a comfortable forward cockpit

The new 27-foot cruiser is of the trunk cabin type which is a distinct departure from the raised deck model of last year. Keeping pace with the popular demand for higher speed and attractive appearance, its designers have given the new craft the graceful sweeping lines and trim appearance seldom found except on larger boats. She is powered by a Gray Model six-60 engine, developing about 40 horsepower in service. In this model as in other Elco craft this year special attention has been given to the elimination of fire hazards and the fuel tank installation is of the new Elco type which eliminates this danger.

While the 27-footer is too small for the usual type of forward cockpit, this attractive feature is retained in an ingenious and novel way of fitting a section of deck at the bow below the level of the side of the boat. Three or four persons may sit comfortably in this with their backs resting against the forward end of the cabin trunk, which is inclined to the proper angle. The cabin arrangement has also been entirely revised to give a maximum of comfort, roominess and convenience. Upper and lower berths installed forward provide sleeping accommodations for four while aft is the galley completely outfitted with stove, icebox, sink, lockers, drawers and shelves.



A new 38-foot double cabin cruiser designed particularly for owner operation is also fitted with a forward cockpit

Several important improvements have been made in the popular 38-foot cruiser which is the model on which Colonel Charles A. Lindbergh and his bride spent their honeymoon. The most important change is the incorporation of a forward cockpit. The bridge deck has also been greatly increased in size and is of the convertible type used on the new Cruisette. Although many other changes have been made in interior arrangements the 1930 model is in all essentials the same as last year's popular craft.

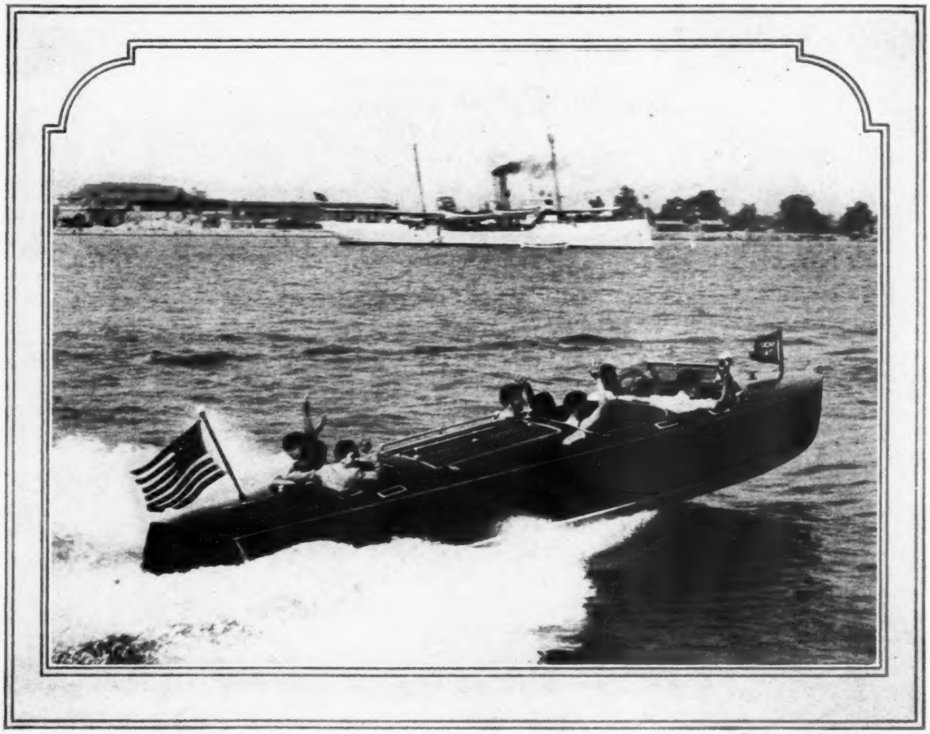
The new 27-foot cruiser is slightly larger and of the trunk cabin type. A departure from previous models

The Elco Veedette for 1930, which was introduced first at the Motor Boat Show in 1929, has met with extraordinary success and is extremely popular with all those fortunate enough to own one. For 1930 the boat is practically unchanged, only such minor revisions in detail have been made as were shown to be desirable by the experience with these boats during the past season. They are of the day cruiser type in which speed and large cockpit space are the primary considerations. The cabin provides berths for four people, a comfortable toilet room and an excellent galley for use on short cruises, but is secondary to the other features of the boat.

As before, the boat will be powered with a 6-cylinder 85 H.P. Elco Buda engine producing a speed of 18 miles an hour. One of the most important modifications is the installation of the new Elco fuel system which eliminates fire hazard.

For the past two years the Elco 38-foot Cruiser has represented the highest development of a small bridge deck two cabin boat designed primarily for owner-operation. The separate permanent stateroom aft, in addition to the roomy main cabin forward, are highly desirable features—particularly when coupled with the large amount of deck house and the excellent speed of this boat. For 1930 the general type remains the same but many important changes and improvements have been made. The popular forward cockpit is incorporated in the design. The bridge deck has been greatly increased in size and by means of the vertically sliding panels developed for the new Cruisette, is capable of being readily converted from an open deck to an enclosed or screened deck house, at will.

The arrangement of the forward cabin has been altered by placing the galley in the bow where it is separated from the cabin. The (*Continued on page* 182)



Photograph by M. Rosenfeld

A 30 foot all mahogany runabout, one of the most beautiful boats designed by John L. Hacker, She carries eleven passengers and is also powered by a 200 h.p. Kermath engine

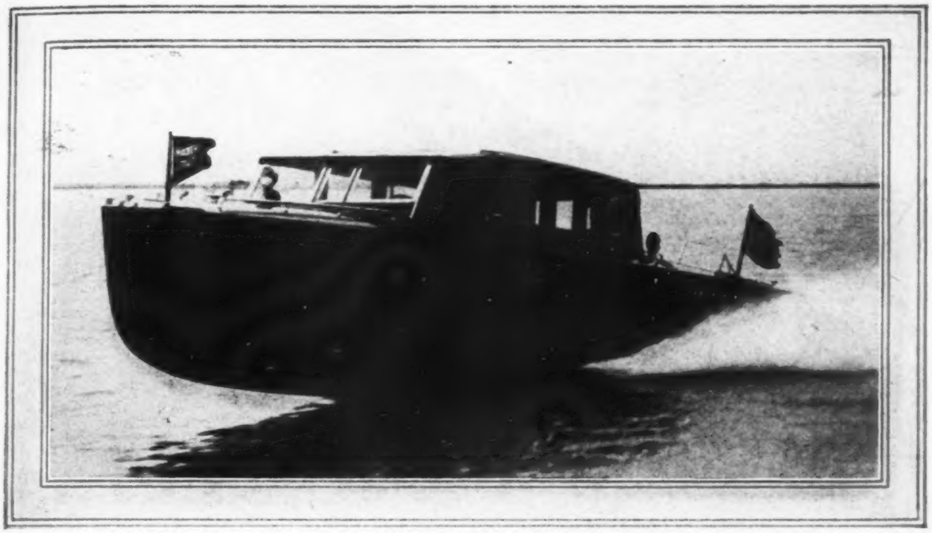
A FINER SERIES OF RUNABOUTS

Improvements in Design of Hackercraft Yield Greater Speeds While Beauty of Line and Skillful Workmanship Produce Handsome Boats

THE new series of Honduras mahogany Hackercraft provides the boating enthusiast with a number of highly attractive models from which to make a selection for his travel needs afloat. Aside from the beauty and luxury which John Hacker has always provided in his boats, the owner of a 1930 Hackercraft is assured increased speeds and driving ease by a change in the underbottom design, and with the additional power provided with the new Kermath models which have become the standard installation in both the 26 and 30-foot models.

The impressive beauty of fine hand-wrought Honduras mahogany, chromium fittings, sleek lines, and trim genuine leather upholstering are combined with such practical features as a full tilting, non-shatterable glass windshield with side wings for added protection, a comprehensive instrument panel, and excellent easy-to-reach driving controls. After seeing the new Hack-

The Hacker 24-footer follows closely the design of the larger boats. With a Gray-8, it is good for 35 miles



The new 38-foot, 42 mile Hacker Cruiser Commuter. Full cruising accommodations are provided while the speed results from a pair of 200 h.p. Kermath engines

ercraft one thing is sure—the 1930 Hackercraft is bound to leave a distinct impression on all those who view the new models.

The 24-foot Hackercraft is still another model certainly worthy of mention. It provides the owner with an exact duplicate in appearance and nicety of design of the larger models. A Gray eight is the standard power plant, providing a speed of 35 miles per hour. There is a distinct promise of lasting enjoyment in its luxurious appearance and refined appointments. During the past year several trophies have fallen to owners of this model. It is a very fast, staunch model that handles with surprising ease and quickness.

Included in the layout are a forward cockpit with all driving controls in easy reach of the pilot, a double set of leather upholstered seats. Aft of the forward cockpit is the engine compartment housing the motor and the after cockpit where two passengers may ride with comfort and complete freedom from spray or an abrupt wetting.

In announcing the new Hacker line, Henry P. Hellmuth, Sales Manager, has stated that all open models are available with the automobile type collapsible top or the permanent sedan top. In commenting on the speed of both the 26 and 30-foot models with the new Kermath 200, Mr. Hellmuth was enthusiastic regarding the speed prospects for the coming year. The new models offer a normal speed of 40 miles per hour but there is a reserve in both the boat and motor to give a full 45 to 46 miles per hour. This added performance contains a real promise of speed for the runabout enthusiast when he cares to bring the extra speed into use.

Another interesting addition to the Hackercraft models is the new 38-foot cruiser-commuter. It is a fast genuine mahogany 42-mile an hour Kermath 200-twin powered job. Full cruising facilities are provided. A smart cabin, toilet, galley and lockers offer their conveniences to the owner. An open forward driving cockpit is included in the design. From the cabin a companionway leads to the large after cockpit. The boat will provide day accommodations for twenty. Sleeping accommodations for four. From what we have seen of this new commuter, we predict a steadily increasing demand for such a speedy, seaworthy and comfortable boat.

The new 10 passenger 26-foot runabout is exceptionally fast, forty-five miles have been secured with the 200 h.p. Kermath

M. Rosenfeld

A picturesque brush among several fast Sea Lyon runabouts of different sizes

POPULAR IN THE SOUTH

Speedy Runabouts of the Sea Lyon Family Ideally Suited to Sport and Recreation at Florida Winter Resorts

MOST complete in its range the 1930 fleet of Sea Lyons provides a boat for almost every form of individual requirement from a mile a minute speed to a smart and practical thirty-miler. In the construction of these boats, it is the belief of Mr. Lyon that performance is dependent on the quality of construction and for this reason, if for no other, the Sea Lyon is more carefully and expensively constructed. In both design and workmanship, the Sea Lyon has set new standards of quality. The experience of owners of these boats has shown that the sound construction assures freedom from annoying layups for repairs and adjustments.

These boats have always been noted for their easy riding qualities, comfort, durability, seaworthiness and ease of handling. The new models qualify on all these points even more completely than their predecessors. The complete line will include seven distinct models which are the Sea Lyon 30, 35, 40, 45, 46, 60 and the Sea Lyon Commuter. The figures used to designate these models do not refer to the length of the boat, but rather to its speed ability in miles.

Many prominent personages have already received their Sea Lyons and among these can be mentioned Powell Crosley, Jr., who plans to use his boat at Sarasota. John McEntee Bowman has ordered two for use at Belleaire, and the extensive fleet at Palm Beach will be augmented by an additional pair shipped to David McCulloch. Last winter Major H. O. D. Segrave tried a Sea Lyon for the first time and expressed his appreciation by securing one for his own use, which has since demonstrated its ability abroad.

The 28-foot Sea Lyon 40 running along at top speed. Kermath or Scripps engines are used

M. Rosenfeld

One of the new series of inboard engined Dee Wite runabouts. The larger boats will do up to 40 miles

TEN NEW FAST RUNABOUTS

Dee Wite Series for 1930 *Includes a Size and Style to Suit Most Every Purse*

NOTHING can dim the romantic appeal of the water—and time only seems to increase man's instinctive desire to own his own boat, and to get out on the water in it. The modern V-bottom runabout, with its dashing lines, and brilliant performance has only heightened the age-old call, but unfortunately for most of us, our modern boating desires have not been so easy of accomplishment as were the less luxurious tastes of our boating forefathers. The matter of price has kept thousands of would-be enthusiasts off the waterways, since the craft they really wanted has always cost more than they cared to pay.

To this large and interested group, the announcement of the new Dee-Wite line of motorboats for 1930 must come as very good news indeed. The Dwight Lumber Company, of Detroit, Michigan, builders of these popular craft, announces a new line of ten V-bottom models, as fine in material and workmanship as any ever produced, and selling at a moderate price range. Nine of these models will be inboard powered, using Van Blerck and Gray motors of from 4 to 8 cylinders of 25 to 140 h.p., developing speeds up to 40 miles per hour on the fastest model. The tenth will be the Dee-Wite Model 1, constructed to take class C and D outboard motors—a staunch and speedy little craft, 16 feet overall that has proved extremely popular during the past two years. Lengths on other models will range from 16 to 19 feet.

The manufacturer has experimented with all the known types of hull construction, and every well known marine motor, over a long period of time, in an effort to develop the most practical and speedy motorboat for the average-income market. Thousands of dollars have been spent in this work, and a total of some 18 models were built and tested before the present combinations of hull and motor, which Dee-Wite has found to be ideal, were arrived at. Genuine African mahogany, which every experienced boatman knows is the finest wood in the world for motorboat construction, has been chosen for hull, deck and bottom planking. The construction on all models is copper fastened. Thicknesses will be from 7/16 to 5/8 inches, employing seam batten construction throughout over tough-grained, native white oak frames, chines, and keels. The beam is wide enough to give a comfortable margin of safety on all models without interfering with speed, while the high freeboard makes the new Dee-Wites exceptionally dry in any weather. Finishes are remarkably smooth and lustrous, and an optional interior color scheme is allowed in the deep upholstery. Due to the location of the motor in the stern of the deluxe models, seating accommodations equal those of the average 26-foot runabout. Another distinctive feature of the deluxe models is the hinged seat back which provides comfortable sleeping accommodations.

Dee-Wite's idea in bringing forth this line has been to build a real quality boat at a price that would make volume sales possible. This price range has been effected by modern straight line production methods, employing the finest materials and the most skilled boat builders that it was possible to obtain. Contrary to the usual practice, all Dee-Wites will come to the owner with equipment unusually complete. On models 5 to 10 for example, it will include such items as flags, anchor and line, bow and stern lines, horn, fire-extinguisher, paddle, completely equipped dash, including tachometer, and many other refinements. The windshield on the deluxe models is safety glass. It is felt by the manufacturers that Dee-Wite in 1930 will remove many or most of the barriers that have kept the man of average income from buying an all-mahogany motorboat.

Photographs by M. Rosenfeld

The new 38-foot Chris-Craft commuting cruiser with smaller forward cockpit and larger cabin

A PARADE OF 24 BOATS

Newest Series of Chris-Craft Runabouts, Speedy Cruisers, and Commuters Make a Most Imposing Array

HERE they come—a long line of 24 new Chris-Craft—the largest and most complete motor boat spectacle ever presented. Eleven runabouts lead the procession ranging in speed from 28 miles an hour to a dashing forty-five miles. Following closely are the sedans—nine of them, deluxe sedans, convertible sedans, and all mahogany sedans; a model to suit every man's requirements. Then comes the 34-foot commuter, one of the fine new boats this year; a boat of which Chris Smith & Sons are justly proud; a dashing craft with twin motor installation designed for fast commuting service. Next the 38-foot commuting cruiser, with an alternate floor plan and cabin arrangement, bringing new comforts to water travel. And finally, the Flagship of the Chris-Craft fleet, the new 48-foot express yacht passes before us. Entirely new in its conception, it brings with it luxuries never before found on the water.

Twenty-four different boats are presented in this finest of marine spectacles ranging in size from the new 20-foot runabout up through the 48-foot yacht. The latest in gasoline motors serves as power for these craft. Horsepower ranges from seventy-five up to 450; speed from 28 miles an hour to 45, and seating

The new 26-foot Chris-Craft runabout is an improved model in this popular size

The new 24-foot Chris-Craft runabout, only slightly shorter than the 26

capacity from eight to thirty persons, in comfort.

In this great array there is truly a boat within the reach of every one. The startling new 20-foot runabout is indeed a marvel in its field. Never before has such a high quality moderately priced small motor boat been built. This boat, built to the high standards of workmanship which mark all Chris-Craft is truly a brother of the big 26 and 28-footers known the world over for their luxury. No expense has been spared to make this the outstanding small boat of the season. For over two years this boat has been on the designers' boards, but never until now have standardization methods allowed Chris Smith & Sons to build her and make her the way they wanted to. The same clear mahogany that goes into the hull of the larger boats will also grace hers; the same nickeled hardware, only in smaller size, will make her decks glisten too; the same careful workmanship and water testing will be hers also. It is only regrettable that this company can build but 500 of these wonder boats in 1930.

Among the closed boats there is presented an entirely new type of convertible sedan. Sedan owners everywhere will welcome this new type of covering which allows the whole rear part of the sedan top to fold forward for easy access and egress. For those that prefer them, there will also be a handsome new all-mahogany sedan.

The 34-foot custom commuter is a boat which, while new in production this year, has long been under discussion as a popular type of boat. First of all, it is fast, forty miles is her speed, and she is equipped with double cabins for protection in any weather. As a commuter for the man who lives a short distance from the city nothing is more suitable. A 38-foot commuter will be available to those who require a larger craft.

The new 22-foot Chris-Craft Runabout is most attractive

The new 20-foot Chris-Craft Runabout, a marvel in its class

Horace E. Dodge, President of the Horace E. Dodge Boat & Plane Corporation

MASS PRODUCTION FOR BOATS

Enormous New Plant at Newport News Covering One Hundred Acres Provides Facilities for Construction of Thousands of Boats

By HORACE E. DODGE

President Horace E. Dodge Boat & Plane Corp.

IT was inevitable, sooner or later, that the principles of efficiency and quantity production, as practiced in the automobile industry from the beginning, should come into the motor boat world. Eventually they will dominate it.

Naval architects, executives, bankers and other students of the progress of motor boating have been predicting this for many years. That it has not happened long before this has been due, I believe, to the fact that motor boat building originally got off on the wrong foot and, instead of encouraging the entire population to take to the water in standardized boats of all kinds built by a cohesive group of mass-production manufacturers, the boat builders have been turning out a highly specialized and individualized product which corresponds very closely with the custom-built body in the motor car industry.

Putting the manufacture of motor boats on the same intensive building and merchandising plane as that of automobiles is a matter that requires the outlay of millions of dollars in money. It requires also a close study of automobile building and selling methods, the adaptation of those methods so far as is practicable to the production of motorized craft, and the deliberate elimination of those practices which have, for all these years, exercised a deterrent effect on the universal adoption of motor boating by the public and given it the reputation it still has of being merely a rich man's sport.

In the entire motor boat industry there are only four or five companies which are equipped, financially and temperamentally, to undertake this revolutionary experiment. One of the first of these to enter into this activity on a scale commensurate with the latent demand for boats which we feel exists in this country and abroad is the Horace E. Dodge Boat & Plane Corporation, with general offices in New York, and the largest and most completely equipped motor boat factory in the world now under construction on a hundred acre waterfront site at Newport News, Virginia. Within a reasonable time we expect to have dealers in Dodge boats in every city and town in America which is adjacent to navigable waterways. In cities where no satisfactory dealer seems available we shall proceed immediately to set up a direct factory branch under the supervision of our national sales headquarters.

The plant now being erected at Newport News will cost well over two million dollars to build and equip with the most modern machinery for the mass-assembly-line production of standardized Dodge boats of all types. Much of the equipment and many of the methods employed in the construction of our boats will be new to the motor boat world, and have been

William M. Horn, Secretary and Treasurer of the Horace E. Dodge Boat & Plane Corporation

Walter Leveau designer of the new 1930 fleet of Dodge boats

decided upon only after a long, searching study of the practices employed in the manufacture of Dodge Brothers motor cars and other well-known American automotive vehicles.

An entirely new fleet of Dodge motor boats will be introduced to the American public for 1930. These will be entirely new in every respect, from artistically figure headed stems to sleek mahogany transoms. Fresh from the designing boards of Walter Leveau, whose name presently will be conspicuous among those of America's greatest boat designers, the new Dodge fleet, temporarily being built in our Detroit plant, will consist of nine models, some of them of a very revolutionary nature indeed. They will include small and large runabouts of different speeds and a new type of twin-screw family cruiser, all double planked with the finest African mahogany obtainable.

A special point in connection with the new Dodge boats is that every one of them will be water tested, on both salt and fresh water, before delivery. The new plant at Newport News is located on the shores of Hampton Roads, where every kind of salt water condition exists, including the opportunity to test all Dodge boats in order to give them superlative rough weather performance. Closely adjacent to the plant is the James River where complete fresh water tests will be made. We feel that the water conditions around our new plant are a very distinct advantage in testing completed Dodge boats and experimental designs.

All Dodge boats for 1930 will be equipped with new Lycoming marine motors, designed and built after the most exhaustive research, by the Lycoming branch of the great Auburn automobile organization, makers of Auburn, Cord front wheel drive and the 265 horsepower Duesenberg automobiles, under the supervision of two of the world's greatest motor car designers, Fred S. Duesenberg and Harry A. Miller, whose leadership in the automobile racing world is undisputed. Lycoming is also supplying the motors for the Stinson Airplane Company, recently acquired by the Auburn organization.

We have placed a definite order with the Lycoming Company for a minimum of 3,000 engines for the coming year and we have already embarked upon a production schedule calling for at least that number of boats, a production unprecedented in the motor boat world.

The new Dodge fleet for 1930 will be as follows: a 16-foot runabout with 40-horsepower Lycoming motor, speeds up to 25 real miles an hour and comfortable seating capacity for five people; a 21-foot runabout, seating six, with a 115-horsepower Lycoming motor and a speed of 35 miles an hour; a 25-foot runabout with seating capacity for eight people and speeds up to 32 miles an hour derived from a 125-horsepower Lycoming motor; a 25-foot runabout seating eight but making up to 38 miles an hour with a 165-horsepower Lycoming motor; a 25-foot sedan with a 165-horsepower Lycoming engine, speeds up to 34 miles an hour and seating capacity for eight people; a 28-foot runabout with plenty of room for twelve people, equipped with 165-horsepower Lycoming motor, with speeds up to 32 miles an hour; a 28-foot runabout, the fastest boat in the new Dodge fleet, with seating capacity for twelve, a 300-horsepower Lycoming motor and speed of 45 miles an hour; a luxurious 28-foot sedan, seating twelve, a 300-horsepower Lycoming motor and 38 mile-an-hour speed; and the first standard cruising boat

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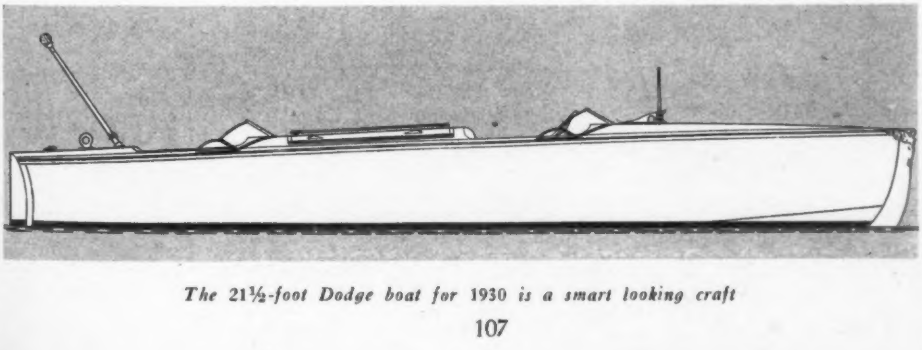
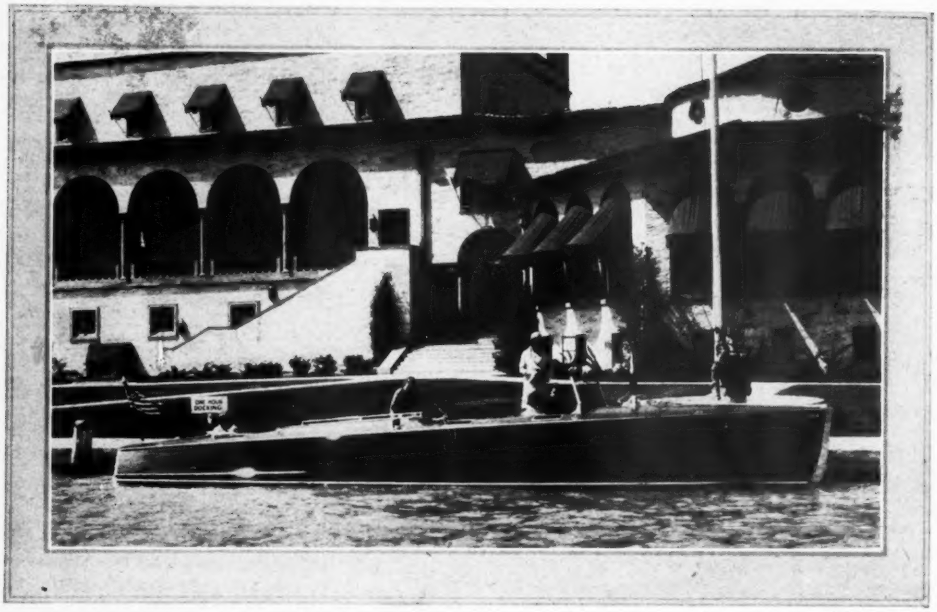


The 21½-foot Dodge boat for 1930 is a smart looking craft



M. Rosenfeld

The fastest standard runabout which does up to fifty-five miles with a 12-cylinder Gar Wood Marine engine

SPEED COMBINES WITH BEAUTY

Ten New and Striking Runabout Models Are to Be Produced by Gar Wood, Inc., During the Year

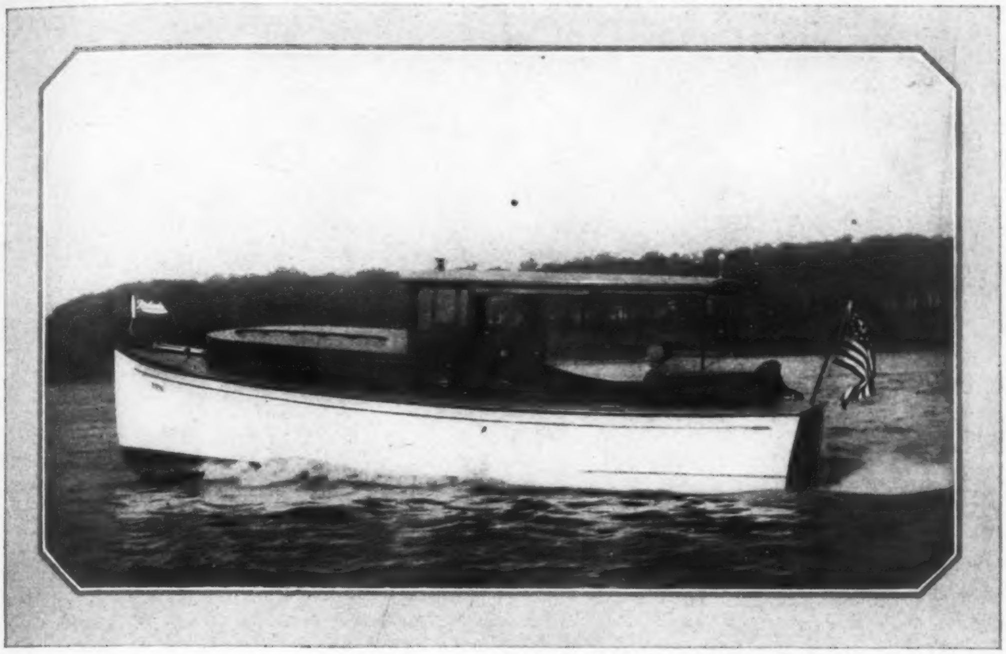
TEN strikingly new and dashing models that combine the beauty of gallant clipper ship days in symmetry of line with the luxury and individualism sought by this ease-loving sporting generation will be produced by Gar Wood, Inc., for 1930.

The ten new models are built around two basic hull designs of 28 and 33 foot lengths respectively. Both the 28 and 33 footers have a beam of 7 feet 2 inches and the bottoms have the characteristic deep Vee and narrow stern, which has made them famous as the easiest riding speed boats in the world. As in 1929, the models are named after the maximum rated speeds in miles per hour. Thus there are Models 30, 40, 50 and 55 with the numerals, in each case, of course, indicating the maximum rated speed. These four principal speed divisions may be further classified into ten different models, since there are several different styles of boats in each speed classification, such as sedans, landaus, limousines, and open runabouts.

In all models there is a double forward cockpit and a single cockpit aft. In the open models, the driver's seat in the forward cockpit is continuous athwartship. In the enclosed models, the driver and companion are seated in two deeply upholstered club type leather chairs. In all models, the cockpits are larger providing greater leg room as well as storage space for navigating equipment, as well as wraps, picnic lunches, fishing and camping equipment.

This year, the ace of the 1930 Gar Wood fleet will be a new style enclosed model, which has fittingly been named the Landau.

The 28-foot flush deck Baby Gar Runabout which does up to 42 miles with a 200 h.p. Scripps



The 29-foot Double Cabin Richardson Cruisabout which can sleep seven

POPULAR SMALL CRUISER

Cruisabout Series for 1930 Offers the Finest Boat and Greatest Value Ever Presented by the Builders

G. R. RICHARDSON, president of the Richardson Boat Company, is again in the front rank of cruisers under 30 feet with his new 1930 Cruisabout. This Cruisabout, Mr. Richardson claims, is the finest boat and the greatest value he has ever offered in his 27 years of boatbuilding.

The 1930 Cruisabouts are 29 feet long, 8 feet 10 inches beam and 2 feet 4 inches draft and like their predecessors that have proven so popular, the new models are of round bilge construction.

The Cruisabouts for 1930 are built in three models: the Single Cabin Cruisabout; the Double Cabin Cruisabout; and the Day Cruisabout.

The Single Cabin Cruisabout is a fifty-fifty day and cruising boat having a large cabin with clothes lockers, toilet room, galley, suitcase storage and berths for four people and, in addition, a windshield protected cockpit 10 feet long with a large comfortable seat across the stern. This large cockpit gives plenty of room for fifteen or eighteen people when day cruising or unusual lounging space for five on overnight trips.

The Double Cabin boat has the same large cabin forward as that found on the Single Cabin Cruisabout. In addition, there is a stateroom cabin at the stern with two wide comfortable berths, lockers, dresser, clothes hanging space, etc.

Gray 6-cylinder 60 h.p. motors complete with flame-arrester, non-overflowing gasoline drip pan, base ventilator and many other refinements are being offered as standard power on the 1930 Cruisabouts. These motors drive the Cruisabout at nearly 12 knots.

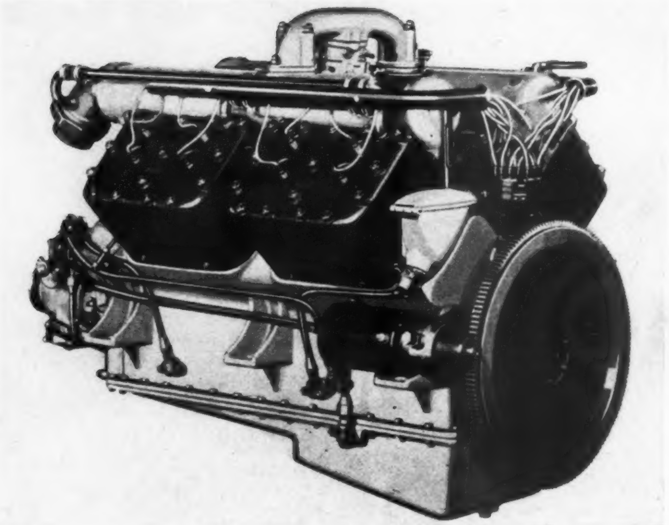
For those who have use for a yacht tender, day Cruiser, fishing, ferry or freight boat the Richardson Boat Company is offering the standardized 29-foot Cruisabout with a cockpit 16 feet long and a small cabin forward with comfortable accommodations. Equipped with a 110 h.p. 8-cylinder Gray marine motor this Cruisabout drives at 16 knots.

Among the new features which are standard on the 1930 Cruisabouts are a built-in bilge pump placed within easy reach of the helmsman, the new Willis alcohol galley stove with remote tank and the gasoline tank fillers and ventilators outside of the cockpit coaming which prevent all possibility of gasoline overflow or fumes from entering the bilge. In addition, the gas tank filler pipes are of the non-splash type which reach to the bottom of the tank.

Both cabin and bilge of the Cruisabout are completely and automatically ventilated by a new arrangement. This prevents any possibility of the disagreeable, musty odor which sometimes develops when boats are not in use except for the weekend and the proper precautions for ventilation are not taken.

The 1930 Cruisabouts in accordance with the Richardson policy are built only of the finest materials the market affords. The framing is of white oak with a single length keel sided 3 inches. All the steam bent ribs are 1⅛ by 3⅜ and in single length from keel to sheer.

The planking is of clear, straight grain cedar ⅞ inch thick and is galvanized screw fastened to the frames. The transom, cabin trim, cockpit coaming, windshield and all other super-structure is of solid Philippine mahogany which has been especially selected to assure the matched coloring that greatly improve the beauty of these boats.



The Chris Smith eight cylinder Vee engine of 200 h.p. is a compact and modern type

WHAT IS A MARINE ENGINE?

A Marvelous Mechanism That Is Expected to Deliver Its Full Power at All Times With Little or No Attention

By WILLIAM B. TAYLOR

WHAT is a Marine Engine? if at all. A general survey of its installation and operation seems to indicate it is that something that should drive a parlor, bedroom and bath at any and all speeds, with or without gas, should be built into the hull at time of putting on the planking and covered up and positively kept out of sight until the planking is removed by hitting rocks, sand bars due to a compass that suddenly went haywire or what excuse have you. It should not occupy space that could be used to stow more ice and round glass containers known as pints and quarts, or possibly a sunken garden.

It provides an excuse for the owner to give vent to his wrath in case the baby has measles or any other poor reason, and has sent more than one poor engine builder to an early grave, through listening to the wails and curses of the owner who forgot to turn on the gas.

While looking through an Engine Text Book printed in 1906 the writer came across the following comments of the newest engine designs of the period.

"There has been placed on the market a new motor of four cylinders cast integral and surrounded by a common water jacket. But at its very best an engine of this type is not adapted to be operated by a novice as it runs at the enormous speed of 1000 to 1100 r.p.m. It requires great skill to start and operate and only an experienced mechanic could tell in which cylinder to look when trouble occurs.

"To start the motor:—As soon as the engine has been primed, rock the fly wheel a few times and then crank quickly, and as soon as the engine starts, adjust the mixture needle so that the motor runs smoothly and then the oil cups so that they feed about ten drops per minute."

How would the boat owner of to-day like to operate that kind of an engine. He just wouldn't. The average boat owner of to-day hardly knows there is an engine in the boat as far as the attention he gives it. He expects it to give service throughout the season, without doing anything more than putting gasoline in the tank and if he happens to think of it some oil in the motor. Considering the conditions under which they operate they give remarkable service.

The automobile engine as a rule is run at half throttle or less, and when in need of minor repairs or adjustments, the owner will take it to a nearby service station.

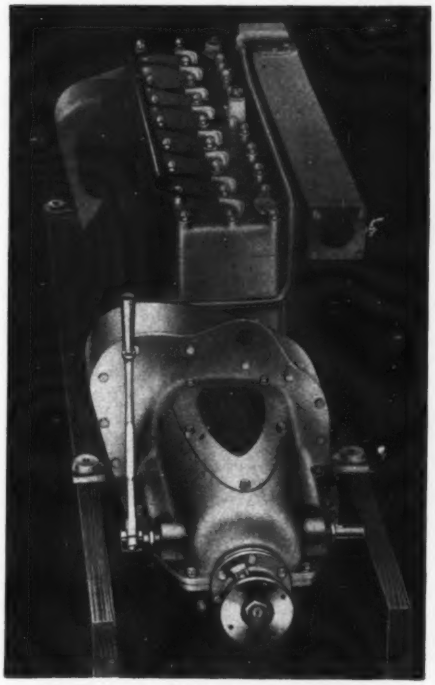
The airplane motor is operated mostly at three-quarter throttle and generally inspected, and adjustments made after each flight.

But the marine engine is expected to give full power at maximum revolutions with little or no attention for the entire season, and therefore must be of sturdier design and more fool-proof than either car or airplane engine. The marine engine more often than it, operates under conditions that would not be tolerated in other fields, and yet at the same time gives good service because it possesses many good points of design and in some cases has led the way for the car and plane engine designer. Considering the comparatively small production in the marine engine field and the small sum of money spent for development work, the marine engine builder is to be commended on the progress made in design, and no doubt the boating industry will progress much faster when engine and boat builders show more co-operation in providing for better service than at present. And more thought is given to the motor installation.

The boat operator as a rule knows only one position of the throttle, that is, wide open and then as a rule within a minute or two from cold start.

The boating public is demanding more comfort and less noise. This will, no doubt, lead to a new class of motors. The marine engine builder must pay more attention to quietness, flexibility and smoothness of operation. At present this can best be accomplished by splitting up the power impulses by using smaller bores and more cylinders, also increasing the revolutions per minute so as to permit the use of smaller and faster turning propellers.

While cost will naturally govern the weight per horse power ratio, a lighter weight per h.p. is within the bounds of cost of the equal h.p. motor of to-day. In 1910 the average weight per h.p. was about 28 pounds for a runabout engine, while to-day it is about 6 pounds, but even this must be reduced and the Vee type or opposed motor seems the logical method as marine engines should have a low center of gravity and be as short as possible. Every inch of motor length means a longer, heavier hull and that much less seating capacity or cabin space.



A starboard eight-cylinder Gray engine, now made in right and left models for twin screw operation

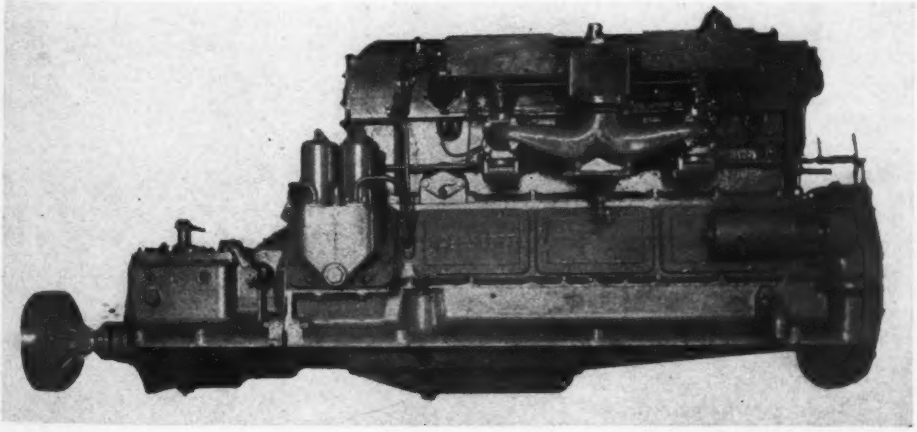
Twenty years ago, eleven cubic inches of piston displacement were required to develop one horsepower, where as to-day the same power, requires only 2¾ cubic inches for production motors.

This has been accomplished by the use of larger and better balanced crankshafts, better cam shafts, aluminum pistons, larger valves, higher compression, better manifolding, with down draft carbureters, forged Dural connecting rods and lighter and better balanced reverse gears.

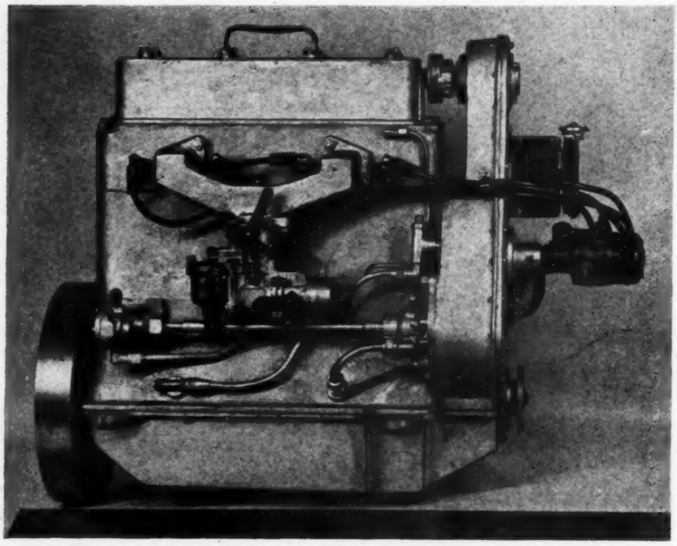
No doubt that for a while to come we will have four and six cylinder in-line motors to take care of the cheaper class of boats. But the engine of tomorrow of the better class of motors up to 200 horse power will most likely be of either the Vee or opposed type with eight cylinders in the fifty horse power size, twelve cylinders, in the 100-horse power and sixteen cylinders in the 150 and 200 h.p. sizes. The larger motors will probably be eighteen and twenty-four cylinder W type.

The 50 and 100 h.p. sizes can be either L Head, or overhead with push rod and rocker operated valves, but the larger motors should be of the type with overhead camshaft and valves. The exhaust valves should be on the outside of Vee so as to prevent condensation and cooling water from working into the cylinder also to allow better exhaust piping between motor and transom. The exhaust manifold should be kept cool as possible as the quick condensing of the exhaust gas helps to scavenge the cylinders. The inlet ports should be on the inside with a large size manifold leading on a continuous upward angle to a Down-draft type carbureter. This arrangement means easier starting, better low speed performance and greater power at full throttle due to the continuous downward path of the gas from the carbureter to the combustion chamber. The gas does not have to be lifted, then carried along a horizontal pipe, and then lifted again, before it reaches the combustion chamber.

While it is possible with a down draft carbureter to use a manifold with an area approximately fifty per cent larger than the valve opening areas and a vacuum of only fifteen inches of water at full throttle great care must be taken to insure an even quantity and quality of gas to each cylinder as uneven power impulses cause a motor to run rough and create a vibration that is often blamed on the crankshaft. If the down draft carbureter is flooded while starting or the



A modern 175 h.p. Hall Scott marine engine with built in reduction gear



A new light-weight four-cylinder Van Blerck of 25 h.p. capacity and a weight of only 165 pounds

float needle leaks the gas can not reach the bilge as it will run down inside the intake manifold into the cylinders, thus removing one of the greatest fire hazards. Fuel should be supplied by a mechanical type pump with the supply tank below the carbureter float bowl level so as to prevent the loss of more than the bowl full of fuel should anything go wrong with the carbureter float mechanism. The fuel pump must be large enough to keep a constant gasoline level in the float bowl at all speeds. A slight drop in the fuel level often causes a mysterious loss of revolutions after a few minutes of full throttle.

The cooling water should be led through the exhaust manifold jacket to the top of the cylinder head and then out the bottom of the cylinder jacket. While this arrangement may seem radical it will help to eliminate condensation along the under side of the bottom wall of the cylinder jacket. This method partly condenses the exhaust gases soon after passing through exhaust valve seat, thus creating a scavenging effect and eliminating some of the back pressure along the exhaust pipe. Also preheats the water before entering the cylinder head jacket and thus helps to prevent over cooling of combustion chamber wall. The downward flow of water absorbs the heat quicker from around the valve seats and the heavy section of metal around cylinder and head joint. It also tends to more uniform expansion of cylinder bore. The average water temperature should not be under 160 degrees for normal running. While a temperature of 110 to 120 degrees will give more power in a new motor it will lead to trouble in a short time such as causing carbon deposits on piston and cylinder head wall, sticky valve stems and guides that prevent the valve from seating properly and thus causing the valve to stay open or burn. The lower temperature also causes excessive crankcase condensation that mixes with the lubricating oil and makes a thick emulsion that clogs oil pipes and strainers, thus causing cut or burned out bearings and scored cylinders. A thermostat bypass should be supplied to keep the jackets at an even temperature throughout the entire speed range. The oiling system should be of the medium pressure 40 to 50 pounds with direct leads to all bearing as this system gives less trouble in the hands of the average owner. High pressure systems no doubt allow the use of smaller bearings but are more sensitive and require more servicing to keep joints tight and oil from leaking out of motor.

The oil should be by-passed around the cooler if one is used, until the oil is thoroughly warmed. Cold oil does not lubricate properly due to the fact that it is sticky and does not circulate freely. Therefore it should be warmed as quickly as possible. In general practice an oil temperature of 175 degrees or over is best as it tends to automatically keep the oil in better condition by evaporating the gasoline and moisture that will accumulate. Provision should be made to force oil directly on the piston skirt at time the engine is started. This will prevent scoffing of pistons, piston rings and cylinder walls. Means should be provided to quickly and easily pump or drain the oil from the oil sump or tank as an owner will not change oil if it requires much effort or soils his hands. Large size, fine mesh screens together with a filter or rectifier will add considerable life to bearing surfaces. Some means should be provided to expel the moisture and dilution from the oil. An air circulating fan could be used to keep a current of air passing along the crankcase and cylinder walls, at the same time sucking the fumes out of the bilge.

Careful design of the cylinder head or combustion chamber will allow using a compression ratio of seven to one or higher for production motors. The aluminum alloy head will be found to be the best for this compression ratio.

The piston should be of aluminum alloy with a fairly thick head designed to permit quick flow of heat through the piston rings to the cylinder wall.

The piston pins should be of the floating type and of a high grade steel so as to eliminate as much weight as possible.

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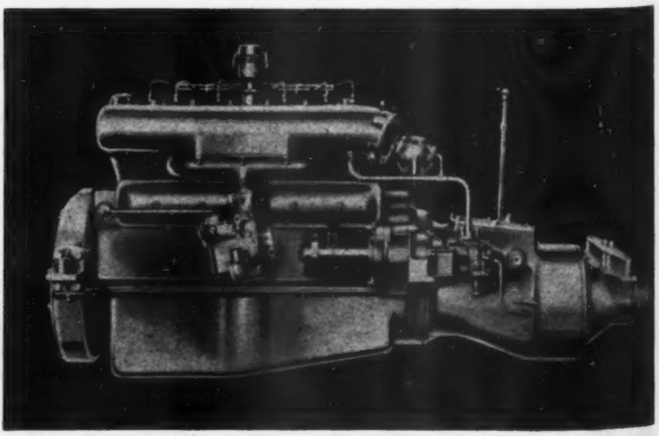
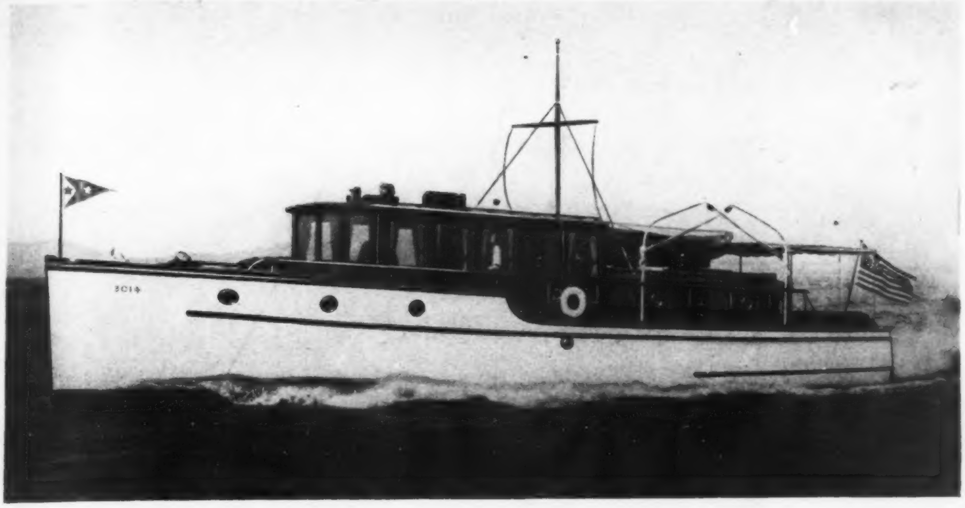


A high speed Chrysler engine, developing 106 h.p. and operating a large propeller through reduction gears



The new twin Scripps engined 43-foot Kyle cruising yacht

THE NEWEST FORTY-THREE FOOTER

S. Clyde Kyle Sponsors a New Motor Cruiser to Embody Many New and Original Features

PERHAPS no individual in the boating industry has amassed a background in creating and marketing standardized cruisers equal to that which S. Clyde Kyle has acquired during the four years he directed with remarkable success the sales of A. C. F. Cruisers. Now at the head of his own organization, Mr. Kyle is introducing to boating America, a new cruiser, the Kyle forty-three footer in which he has achieved to a maximum degree the happy combination of small cruiser economy with large yacht accommodations.

Mr. Kyle's entry in the boating business might be termed accidental, yet it was the deliberate step of a keen business man, quick to grasp the opportunities offered in this rapidly growing sport. For many years prior to his appearance as a national figure in boating affairs, Mr. Kyle conducted a railroad supply business on the Pacific coast and was also an ardent yachtsman of long experience. His cruisers in those days were used for two purposes. One, for family outings on week ends, holidays and evenings. Two, as a retreat to which he could invite business acquaintances away from the tumult of the city, for a cruise or fishing expedition to flavor cut-and-dried business discussions with the savor of sea breezes. Incidently members of these floating business conferences developed healthy appetites which were satisfied with culinary masterpieces from the large galley which was Mr. Kyle's pride and the object of envy among California yachtsmen.

S. Clyde Kyle, nationally prominent in motor boating, who will build new cruisers

In 1926 Mr. Kyle felt the need of a new and larger cruiser. Accordingly, he sketched his ideas on paper, creating a boat which in a few months became nationally famous as the A. C. F. 47. No sooner had Mr. Kyle let out the secret of his new cruiser than he found himself no longer a merchant in railroad supplies, but a boat builder. No less than seven of his friends wanted duplicates of the new ship which was to sail under the Kyle colors. Hence, the entrance of S. Kyle in the standardized field.

With such spontaneous local appeal, Mr. Kyle deduced there should be proportionally as large a national market for duplicates of his new forty-seven footer, so he made arrangements with the American Car & Foundry Company to build the boats for the coast to coast market. Since then, and up to a few weeks ago, Mr. Kyle drected the national sales of A. C. F. Cruisers.

Now the new chapter. S. Clyde Kyle is sponsoring a new motor cruiser bearing his name and being sold by his own organization with offices in New York City. It is an enclosed

(*Continued on page* 484)

The 33-foot Super Playmate cruiser as built by Wheeler Shipyard can do 26-miles with a 172 Scripps engine

Photographs by M. Rosenfeld

SEAGOING PLAYMATES

Fifteen New Models Feature the Popular Line of Sea Skiffs Which Have Both Speed and Grace

SPECIALIZING in fast seaworthy boats of a modified sea skiff type, The Wheeler Shipyard in Brooklyn, New York, is preparing to supply no less than fifteen distinct models for the current year's production. The usually accepted form of seaskiff is constructed with lapstrake planking, although the Wheeler boats are largely constructed with smooth planking. This makes them somewhat faster as the laps in a hull have a tendency to break up the water stream flowing past the bottom, creating a greater resistance. The series of boats which they build begins with two types, twenty-six, and twenty-nine feet in length which are closely similar, differing only in the matter of length. These two boats will be available in what is known as a single cabin, a short cabin, and a sedan model. These boats are all well suited to general sport and fishing service, the short cabin type being particularly adapted for sports service, since it has more open cockpit space than the others. The larger boats will be thirty-three, thirty-six, and forty feet in length and grouped into single and double cabin styles, with a distinct sport model available in the thirty-three-footer, and sedan model in the two larger sizes. In addition to these, the Wheeler Shipyard is also prepared to supply a large 47-foot custom designed cruising craft, fitted with single or twin engines.

Interior of the 33-foot Playmate. Four berths are forward with the galley at after end of cabin

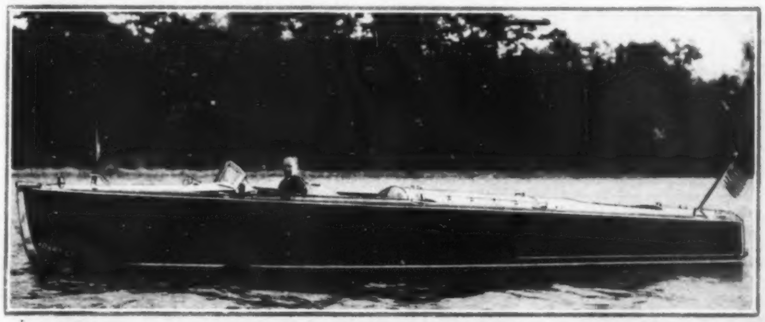
The bottom and hull lines of Wheeler boats have been developed after many years successful experiment which have produced particularly fast hulls without sacrificing any of their seaworthy qualities. Even when running at high speed, the flat sections of the bottom are not lifted clear of the water so as to cause pounding. The interiors of the several boats are arranged particularly to suit the size of the hull. In the larger sizes the berths and accommodations are naturally roomier and more comfortable than the smaller ones.

SPEED GRACE AND COMFORT

Dart Line for 1930 Includes Five Smart Models

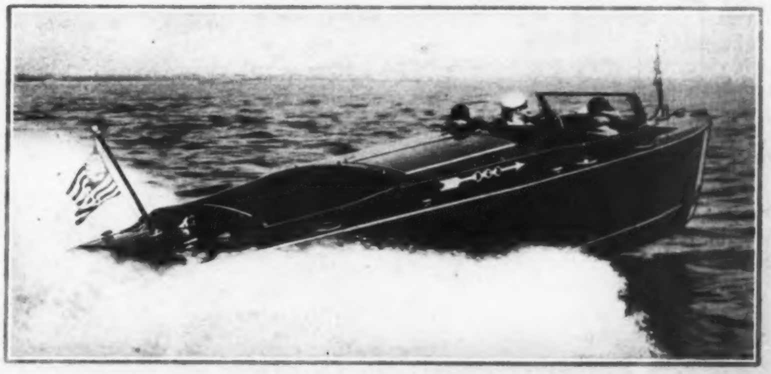
Ranging in Length from 18½ to 30 Feet

The new 26-foot Dart runabout preserves the pleasing hull lines that have marked it in the past. Numerous refinements have been made, however, and extra items of equipment add comfort and convenience for both driver and passengers



Flagship of the Dart fleet—the 30-footer. Streamlines, a well-designed hull, and a 450 h.p. Liberty motor produce a speed of 56 m.p.h. The generous beam, high bow and good freeboard account for the dryness which features it

The little 18½-footer retains all the structural quality, excellence of workmanship, and outstanding performance of its larger brothers. Standard power plants drive it better than 34 m.p.h.



Another masterpiece—22½ feet of trim runabout beauty. Improved deck lines have contributed to its pleasing appearance and a 125 h.p. Chrysler motor guarantees ample speed together with flexibility and dependable operation

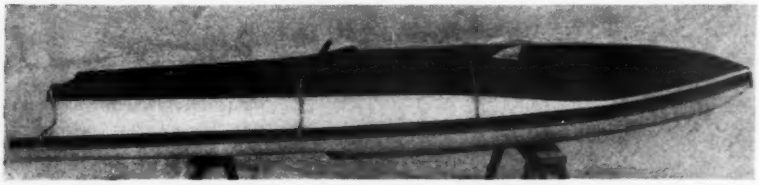
Mullins Roadster is long, low and rakish, accommodates two and three if you don't mind crowding

AN ALL-METAL ANNIVERSARY FLEET

The Thirty-sixth Anniversary Fleet of Mullins Boats Distinguished by New Designs in Corrosion Resisting Metal Construction

EIGHT colorful new models in corrosion-resisting metals finished in enduring marine lacquers have been produced during 1930 by the Boat Division of the Mullins Manufacturing Corporation, Salem, Ohio.

Mullins Thirty-Sixth Anniversary Fleet is distinguished by new hull designs, new materials, new comforts, luxuries and color harmonies.



The Torpedo is the racer for Class C, D or E engines. Tarpon Model is similar with two cockpits

In design, special attention is directed to the double-flare hull, made possible in outboards at modest prices by Mullins methods of pressed metal construction.

New in structural detail are improved fluted bottoms to promote riding ease and control.

The fleet consists of the following models:

The Dolphin, a smart, distinctive family runabout, ideal also for fisherman or general use at camp or summer cottage.

The Albatross with same utility and staunchness as the Dolphin, is equipped with ample coaming and decking for added protection on open waters.

The Flamingo embodies the utmost in outboard boat luxury. Two cockpits will accommodate four to six. There is space under decks to stow things. Auto type steering wheel and remote throttle control are provided.

Torpedo, a class C, D or E step plane racing hull, is perfectly streamlined to both air and water. You cannot break its back or even pound a leaky seam into it.

The Tarpon built for two is readily convertible into the racing Torpedo from which it differs in that it is provided with two cockpits instead of one.

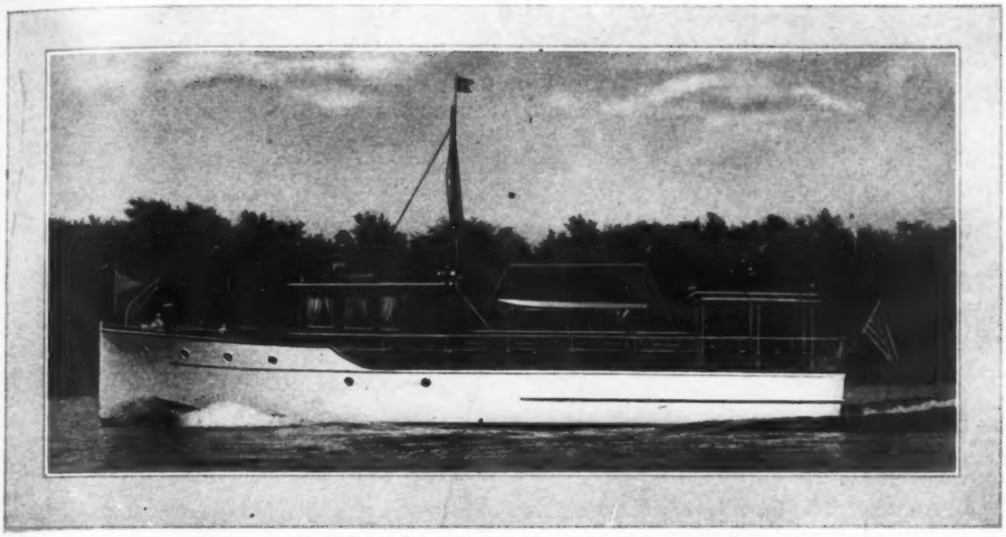
The Roadster — low, long, rakish — the embodiment of youth and pep. The intimate single seat accomodates two— three, if you must carry a crowd.

The Lark—for the whole family. Fine for A or B motor or oars.

The Penguin is the latest design of the world-famous Mullins row boats.

Hulls are made of galvanized Armco Ingot Iron and, for those who want a real corrosion proof hull, in the modern alloy steel, KA2.

The Flamingo is the luxury craft. Two cockpits for four or six, lots of room and comfort



The staunchly built 55-foot Vinyard cruiser is an able seagoing craft

A TWIN SCREW FIFTY-FIVE FOOTER

Substantially Built Cruising Craft of the Vinyard Shipbuilding Company Ready to Start Cruise When Received

THIRTY years ago, the Vinyard Shipbuilding Company started the construction of boats on the Mispillion River at Milford, Delaware. The first building was a small frame structure with a very limited amount of machinery. It was only a few years before this, when all work on boats was being done by hand, and labor saving machinery was unknown. Such operations as the beveling of frames, shaping of planking, fashioning of keels, and similar operations were all done by hand labor and tools.

This company has grown in the intervening years so that it has been necessary from time to time to add to their facilities and the most recent of their new buildings is a steel frame structure 58 feet by 147 feet which is large enough to permit of the construction of four of their fifty-five foot yachts, or two each of the 50 and 75-footers. Overhead cranes facilitate the handling of material. The lumber for keels is the famed Delaware white oak which is cut in their own mills and used in single lengths for each of the boats. The quality of this native timber has contributed in no small measure to the success of their boats.

Looking aft in the spacious deckhouse which serves also as a dining and social room

The new Elco 42 standardized cruiser is expertly supervised during construction and certain to be a source of carefree pleasure

IT'S THE OWNER'S FAULT

Why Troubles With a New Boat During Its First Season Are Faults of Omission—Rather Than Commission

By ALFRED F. LOOMIS

A FEW minor errors in the installation of the motor in my auxiliary cutter last spring let me in for a peck of trouble during the summer months. I hadn't reckoned on trouble in a new boat equipped with a new, reliable motor, and by the time I saw the last of it I was pretty thoroughly fed up. I told myself (and everybody else who would listen) that when a man bought a new motor car he expected service and satisfaction and got it. I asked myself why the same couldn't be true of an engine installation in a boat. Finding no answer to my question at that source I inquired around. Perhaps the result of my inquiries will be interesting and valuable to others. I do not promise the reader that after one reading of the ensuing article he will be cured of all mechanical ailments, but I offer the hope that he will find himself on the way to convalescence.

Let us assume first that the owner of a new custom-built motor boat or auxiliary is himself responsible for all the troubles he encounters during the first season of operation. He really is responsible in a way, but his faults are those of omission rather than commission. He may contribute suggestions to the designer or builder concerning the layout and the furnishings, but when it comes to the installation of the motor, he leaves all that to the builder.

This is where he makes his fatal mistake. Yet it is an easy mistake to make, for he has confidence in his builder, and the building up of an engine bed, the connection of the various pipes, the wiring of the ignition system, and so on, are technical processes beyond the comprehension of the average layman. So are they beyond the comprehension of the average boatbuilder, if I may believe the word of half a dozen prominent engine dealers. The builder, a past master in the carpenter's trade, is quite probably a novice in the mechanical trade. Years ago he learned to install motors in a certain way, and if that way was wrong then it is still wrong. The mechanic whom he employs to do the actual work may be careful and conscientious; but if he is not he can blame any resulting trouble on the motor, and his employer will back him up.

It would take a more active imagination than I have to list all the troubles that may arise from careless installation—but I can make a start. For instance, when the fuel tanks are delivered at the builder's shop they may be left standing around uncovered for a few days. Shavings or wood plugs may drop unnoticed into the filler openings and, weeks later, cause a stoppage of the motor when it is needed most. Or the connections of the fuel line may be rendered leak-proof with white lead instead of litharge. The lead, being soluble in gasoline, will sift through the strainers in the fuel line and finally arrive at the bottom of the carbureter bowl, to become roiled up when the boat is moving in a seaway and stop the motor.

In auxiliary installations, where the motor is placed below the waterlines, the muffler may be set above the line of the exhaust manifold, with no adequate outlet for the cooling water. Such installations, and there have been thousands of them, may give no trouble until the motor backfires or until a following sea fills up the muffler. But when the trouble does start it may not stop short of a completely ruined motor. The outlet from the cooling system may be of too small a diameter to handle the water discharge. This may impose so great a back strain on the water pump that it leaks disastrously or burns itself up. In the installation instructions accompanying a new motor the necessary diameters of exhaust pipes and water pipes are usually given. But it is no exaggeration to say that the average mechanic is guided by past experience and rarely troubles to read what the motor manufacturer has to say on the subject.

Trouble may arise from inexact knowledge of wiring, or failure to check up the system after the motor is in operation. If the generator, for instance, is permitted to deliver electricity at too high an amperage it may, in a continued run, burn out its winding before any fault is suspected. Unnecessarily long leads from the starter switch to the starter or to the storage battery will impose too great a strain on the battery. Current will be consumed faster than it is generated, and before long the motor will be blamed because it has to be cranked by hand.

And so on. I see no use in making this a catalogue of what may happen, because almost anything unpleasant may result from carelessness. The interesting thing, it seems to me, is the boat owner's attitude before and after trouble happens. Before, while the motor is being installed, he takes it for granted that the builder knows his business. He expects to get pleasure out of the boat and it can be no pleasure to him to argue with the builder about proper alignment of the engine on its bed, location of the water inlet, placing of the fuel tanks, and the like. So he lets sleeping dogs lie.

After trouble starts he blames first the motor. After that, if the motor is proved to be blameless, he condemns the engine dealer for not tipping him off to the troubles that may arise from faulty installation. The dealer passes the buck to the builder, and if the builder happens to have an outstanding bill against the owner, or if the owner expects a few little extras gratis from the builder, he finally gets around to blaming himself —which, as I said, is where the blame belongs.

Now let's see, if we can, how the boat owner may avoid engine trouble during the first season of operation. To begin with, he must look carefully before he decides what make and type of motor to buy. He must base his selection on the proven reputation of a motor rather than the sayso of interested persons. It is all one to the average boat-builder what motor a man buys. The builder gets about the same commission from each maker, and he will install any job he is told to.

The motor having been selected, the boat owner must ask himself whether it is to his own interest to purchase through the boat-builder or through the authorized engine representative or dealer in his locality. If he places the order through the builder, the builder will claim and receive from the dealer a substantial discount from the list price of the motor. If the order is placed direct with the dealer, the builder will not generally receive this discount. Questions for the boat owner to ask are: (1) Will the builder, having received his rakeoff, give me service or equipment in addition to what I could normally expect? (2) Will the engine dealer who does not have to split with the builder give me better than routine service? (3) Is additional service more desirable coming from the boat-builder or the engine dealer?

Having asked himself these questions (and they may as well be asked before the order for the boat is placed with the builder) the wise owner can then get down to business. Let us imagine him interviewing the builder in the following manner:

Owner: I understand that if I place the order for the motor through you you will get a discount amounting to ten to twenty per cent of the list price. Is that right?

Boat-builder: Pleasant weather we're having, don't you think?

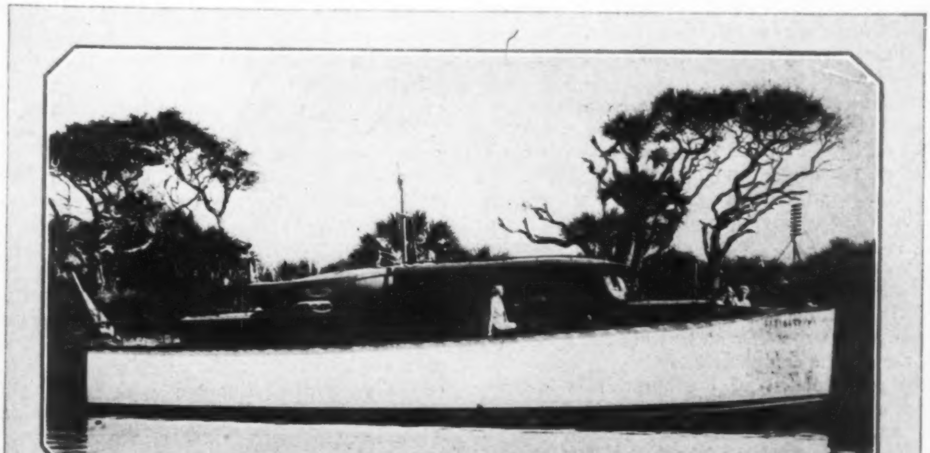
Owner: If you get this rakeoff, which, in my opinion, you're not entitled to, will you guarantee that the motor is correctly installed?

Builder: All my work is done right.

Owner: Getting right down to cases, will you repair free of charge any mechanical troubles resulting from faulty installation and not due to faults in the motor itself?

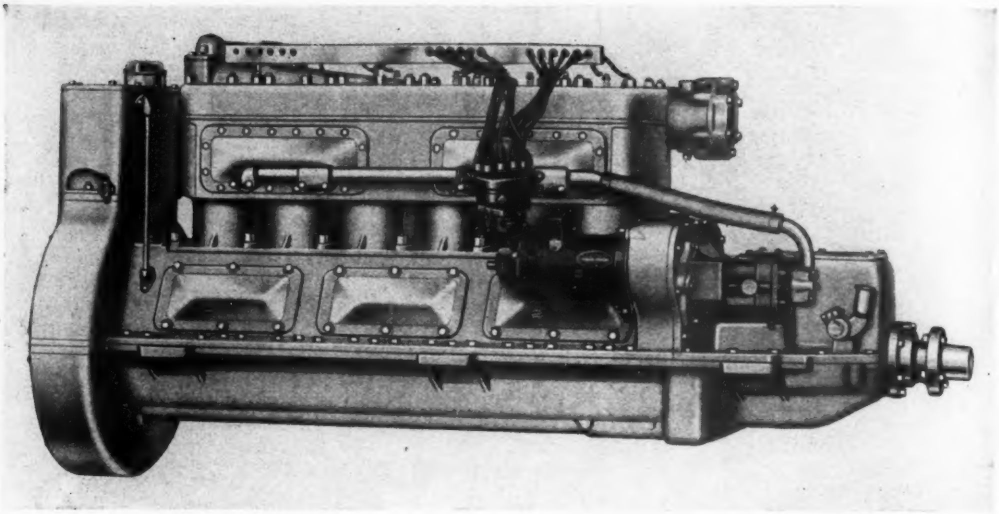
Builder: Say that again.

(*Continued on page 200*)



Virgil Moore

One of the new Fairform Flyers which have demonstrated their ability and careful construction in many successful cruises



Exhaust side of the 150 h.p. six-cylinder Kermath marine engine of 678 cu. in. displacement

THE TRENDS IN MARINE ENGINE DESIGN

Outstanding Advances Noticeable in Marine Engine Design Due Largely to Increased Demand for Engines and Better Design and Manufacturing Facilities

By J. B. FARR,

President, Kermath Mfg. Co.

I HAVE been asked to define the future trends in marine motor design and development—attempt to point out the advances that may be expected in the improvement of marine engine performance; in the betterment and economy of operation which the alert boat builder and his boat-conscious buyers now await with such interest. I approach this task with some misgiving. Undoubtedly, there will be those who disagree with me, but if, by attempting to forecast the future we will better the boat industry as a whole, I'm frankly for it.

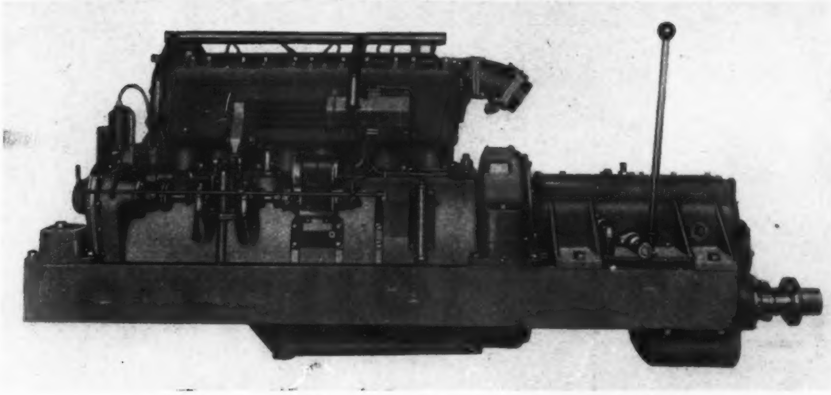
To better understand the future of marine engine development, it might be wise to briefly review the stages of progress on which present day advancement of marine engine design and operation is based. In the early days, marine engine manufacturing was surrounded by a fog of experimentation—unscientific for the most part, usually hit or miss. The automotive industry was then in its swaddling clothes and contributed little or nothing to the advancement of marine practice. In fact, on occasion, the motor car builder was known to borrow his ideas from his contemporaries in the marine engine field.

But the practicability of the automobile over the motor boat as a means of transportation soon found its following and slowly but surely the automobile manufacturer forged ahead of the boat and engine builder. From two cycle to four cycle design was actually but a step in automotive circles once the four cycle principle proved its superiority. Not so in the marine field—for times here changed more slowly. Many of the old school clung with an almost bitter purpose to their pet theories of yesteryear and conditions alone eventually forced their hands and demanded change.

There were too few visionaries in the marine engine field in those days, and for years motor boating paled into insignificance before the rising sun of a new era in fast transportation. But motor boating has since come into its own and we find that the impetus which motor boating has enjoyed since the war is reflected in the oustanding advances so noticeable today in marine engine design. To summarize the past is to gain a picture of the future. Such a forecast must of necessity be made with certain reservations, but these design trends can be fairly accurately defined if we review the engineering progress thus far accomplished in marine engine design.

For our purpose we may say that marine motor designs fall into three general classes of use, each having its own individual application and needs—its own engineering problems. If we are to consider the trends of design, we must first understand the uses to which the various types of marine motors are put. For the sake of convenience let us classify these uses as follows: (1) High speed runabout and high speed express cruiser engines; (2) High speed cruiser engines; (3) Low speed cruiser and work boat engines, omitting any discussion of the outboard whose problems are entirely different from the inboard motor.

Now let us examine the characteristics of the high speed marine motor. We discover a noticeable refinement in weight and horsepower. Weight has been reduced and horsepower has been greatly increased. Higher compression, lighter and stronger metals, the use of aluminum castings and special alloys, increased engineering data have accounted for much of this



A substantial reduction gear Buda marine engine developing 130 h.p. with six cylinders

weight reduction and power increase. A great deal of experimental work has also been a factor combined with expert and much better manufacturing facilities.

It is doubtful, in my opinion, whether the weight per horsepower can be reduced very much more in marine engine design. This is due to the nature of the work demanded of a marine motor in contrast to that required of automobile and aviation motors. A 100 per cent load is placed on every high speed motor that is installed in the fast runabout or speed cruiser. Just shut the power off one of these boats; it's like applying the heaviest possible brake. Your boat comes to an immediate stop. Your motor car, on the other hand, floats along once your speed is attained without any great demands being placed on the motor. It is also true, except when climbing, that your airplane motor does not have the constant load factor which the high speed marine engine encounters. Few give this phase of marine engine design serious consideration, few realize the severe task of the designing engineers to maintain sustained performance and still provide those thrilling speeds so popular with the modern yachtsman.

Further advances in design may increase engine revolutions. Manifolding and carburetion refinement will largely account for this extra power factor. But if motors are lightened the factor of safety will undoubtedly suffer. It therefore becomes a matter of choice on the part of the boat owner. Will he sacrifice his own well being and the dependability of his boat for an extra burst of speed? Some compromise on his part seems necessary.

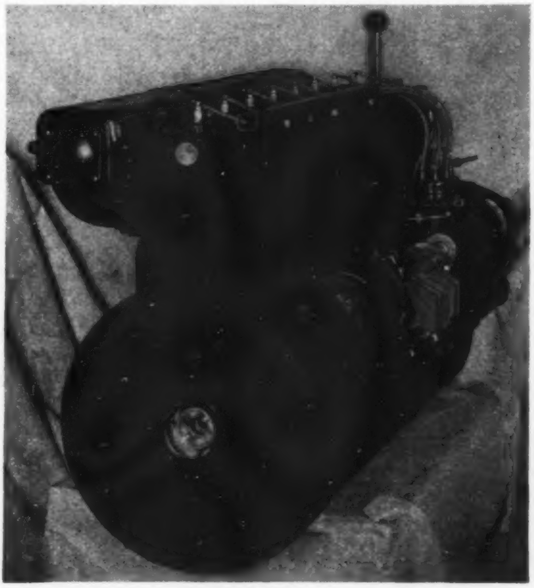
Service is another important consideration to be reckoned with by the builder and the owner. Until such time as the boat owner can find more adequate service facilities than are at present offered boat owners—more efficient and expert mechanics to keep high speed engines properly tuned up, he is, we believe, selecting an engine for its dependability rather than its outstanding speed performance.

I say, therefore, that the limits of speed have been closely approached in marine power. Higher speed means higher compression. High test specially treated fuel is essential in the high compression motor. The present inadequate distribution of doped fuels at service docks is still another deterrent in permitting the engine manufacturer full scope in his motor designs.

It is true that we will continue to see motors turning 3000 revolutions and more but these will be used for racing purposes. For normal usage 2500 revolutions per minute seem to represent a limit for engines rated over 140 h.p.

The reader perhaps begins to wonder whether marine engine design has reached the limits of improvement and perfection, whether it is possible to put one thing more into the overloaded Christmas stocking.

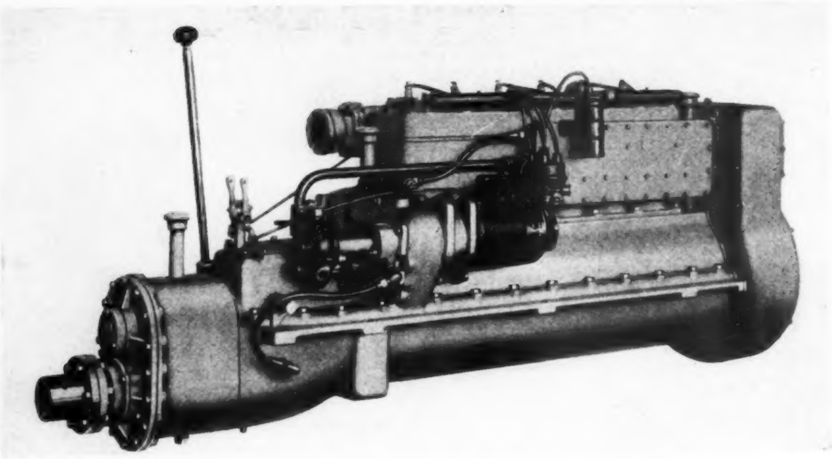
Based on our experience in designing and building marine engines, and our observation of the motor car and aviation industry, we can attempt a summary of the trends in high speed marine engine design—and what can possibly be expected.



Niagara's new straight eight marine engine built in 132 and 156 h.p. sizes

Better workmanship has a direct bearing on better performance—this can and will be improved upon. With equal certainty it can be shown that more careful selection of materials to stand up under heavy stresses of high speed operation is a natural source of betterment. The present scientific data available with well trained engineers and carefully selected inspectors to check materials is a fundamental necessity.

Accessories are being rapidly refined to provide the utmost in power development. Improvement of lubrication systems in high speed motors will add to the life of the motor and aid its performance, insure greater dependability.



A reduction gear built into a six cylinder Universal engine of 75 h.p.

Carburetion and ignition will, in the next twelve months, receive a large amount of attention, and we can look for many improvements from this quarter to aid the leading engine manufacturers to insure still more efficient and dependable motor operation.

In the design of high speed motors, the dry sump engine will become more universally used by reason of the ease of installation which such design provides the boat builder and the extreme handiness to the owner in draining and replenishing the oil supply, which is a most important feature with many types of installatons.

It is a growing certainty that high speed runabout and cruiser engines will have their reliability stressed by such contributions in design. Efficiency and economy, while secondary factors, will come in for their share of improvement. Workmanship and selectivity of materials will certainly receive closer attention and we can expect advancement in motors adapted to high speed cruiser use to furnish 10,000 boat-miles without major adjustment or overhaul. Moderate boat speeds up to 20 m.p.h. will partially represent the solution to the problem in cruisers up to 45 feet in length.

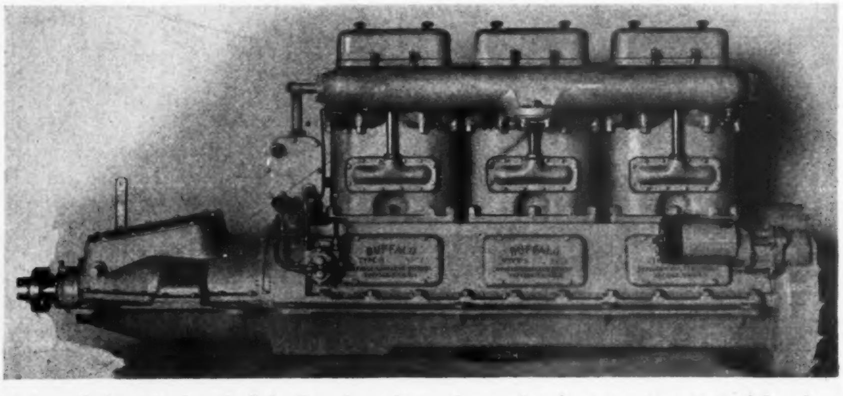
Ignition equipment will be designed to serve the ends of dependability and safety. Refinements can be looked for in reducing vibration and adding to the quietness of operation. Boat builders will undoubtedly cooperate by the introduction of flexible mountings for motors.

"But," the reader remonstrates, "what about multiple cylinder power. The possibilities of the high speed eight and twelve cylinder engines have not yet been mentioned." Granted. I have confined my remarks to the six cylinder marine engine design and its prospects for further improvement because it naturally follows that no new principles of design will be applied to multiples of the six cylinder marine engine. We can, however, expect increased power and boat speeds from multiple cylinder power.

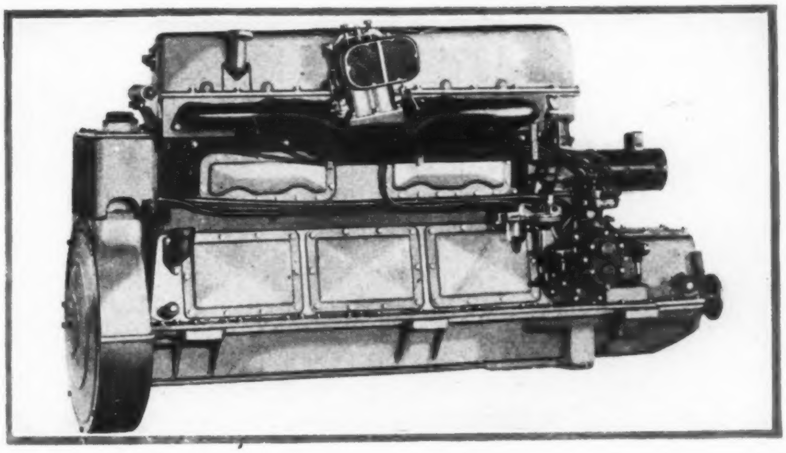
It is a fact, conceded by most engineers and designers that the approximate limits of a high speed marine motor have a cylinder bore not to exceed about 5 inches in diameter. This is due to the definite limits of mechanical and structural efficiency beyond which it is more or less unwise to go. To therefore secure an increased source of power for fast boats it is necessary to increase the number of cylinders in a marine motor to eight or twelve. Whether it be a straight eight or V type eight motor the principle of design has already been pioneered by the automobile and aviation motor manufacturers. It therefore becomes evident that if the design of the eight or twelve cylinder motors are adapted to the heavier duties required of marine power plants, the results will provide the boat owner with a dependable source of increased power and speed.

It is safe to predict that a very marked increase in the power ratio to a very small increase in the weight ratio will result. On the other hand, it is questionable at times whether the results justify this increased power ratio. The common experience of boat and engine builders in experimenting

(Continued on page 184)



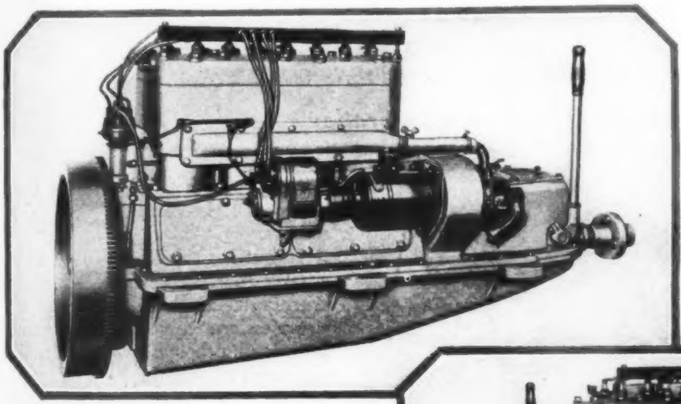
The six cylinder 200 h.p. Buffalo Dreadnaught marine engine is a compact, powerful unit



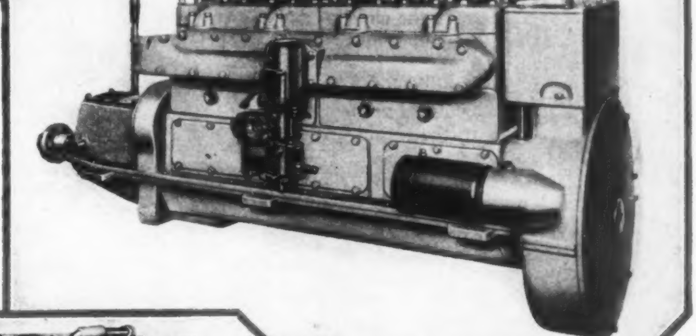
The most powerful of the six cylinder Kermaths is still called 200 h.p. but actually produces much more. This engine is a 5 by 5¾ inch valve-in-the-head type, suitable for runabouts and fast boats generally. It is fitted with the highly efficient down-draft carburetion

DEPENDABLE SOURCES OF POWER

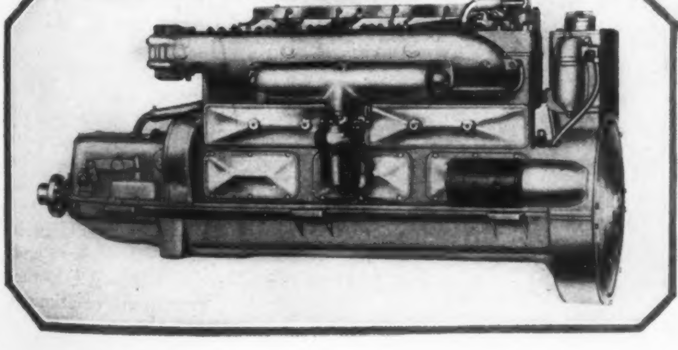
Four and Six Cylinder Kermaths Producing Still Greater Power



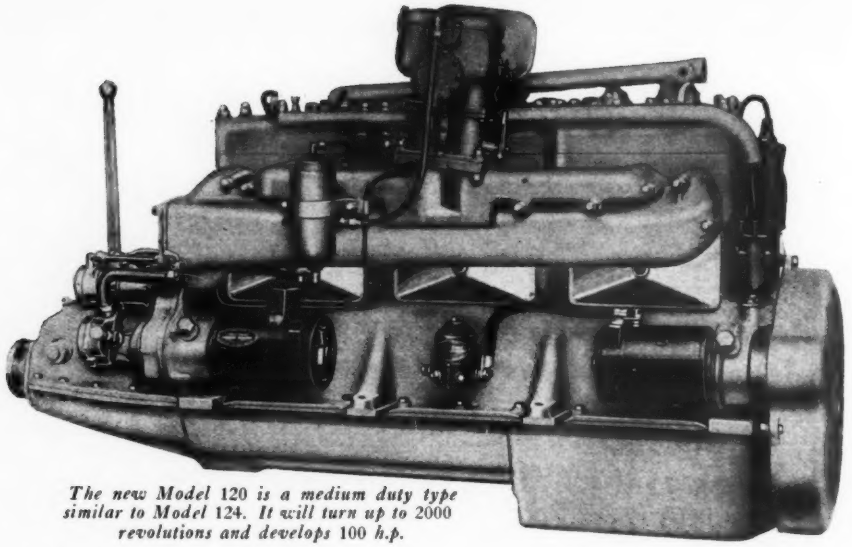
The 35 and 50 h.p. 4 cylinder engines are similar in appearance and well adapted to heavier boats from 35 to 50 feet. They are extensively used for commercial boats both here and abroad. The bore is 4⅜ and the stroke 5½ inches



The six cylinder 65 and 100 h.p. sizes remain practically the same as previously. Both models have the same bore and stroke differing only in the maximum revolution rate which adapts the high speed model to fast runabout and light cruiser work



Another powerful series is the 85 and 125 h.p. Kermath engines, particularly adapted where speed is essential. Many improvements have been incorporated into the latest design to provide additional safety in the operation of a boat. A new form of mechanical fuel pump is also a standard fitting



The new Model 120 is a medium duty type similar to Model 124. It will turn up to 2000 revolutions and develops 100 h.p.

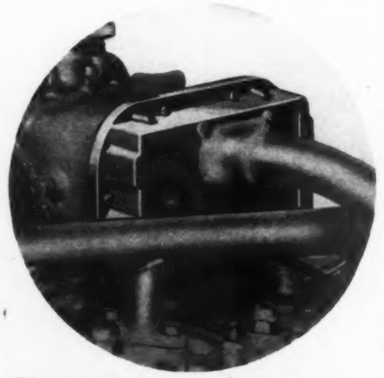
SPEED AND POWER GOING UP

Two New Engines Added to the Scripps Line Designed Particularly for Full Load High Speed Operation

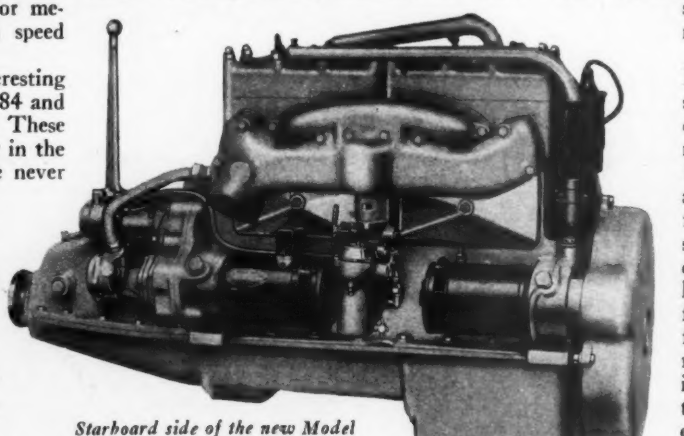
THE Scripps Motor Company have never featured yearly models. Instead they have long followed the practice of incorporating new developments in their product as rapidly as perfected whether it happens to be Show time or mid-season. It is not surprising then that the various Scripps Models will feature no radical departure from the corresponding highly successful models of last season.

In the sixteen models which go to make up the line for 1930 will be found the answer to the power needs of the yachtsmen in search of a power plant within the range of 15 to 200 h.p. for medium duty or high speed service.

Particularly interesting are the new models 84 and 120 respectively. These models are new only in the sense that they have never before been offered to the public in their present form but in truth they are fundamentally tried and proven products being logical developments of the famous Models F-4 and F-6 which contributed largely to Scripps' present position as a producer of light compact high speed motors.



The new Protectoseal flame arrestor as applied on Holley downdraft carbureters



Starboard side of the new Model 84 Scripps engine which delivers 80 h.p. at 3000 revolutions

In outline the Model 84 is very similar to the Model F-4 but inwardly it has been revised as to compression, valves, pistons, camshaft and other important details to permit of sustained operation at from 2,800 to 3,000 r.p.m. within which range it delivers a liberal 75 to 80 h.p. It carries as part of its standard equipment a Barlow roller-type fuel pump. The Model 84 in no sense displaces the Model F-4 but is offered as a distinct model to power the 18 to 20 foot runabout of the type that is springing into such marked popularity.

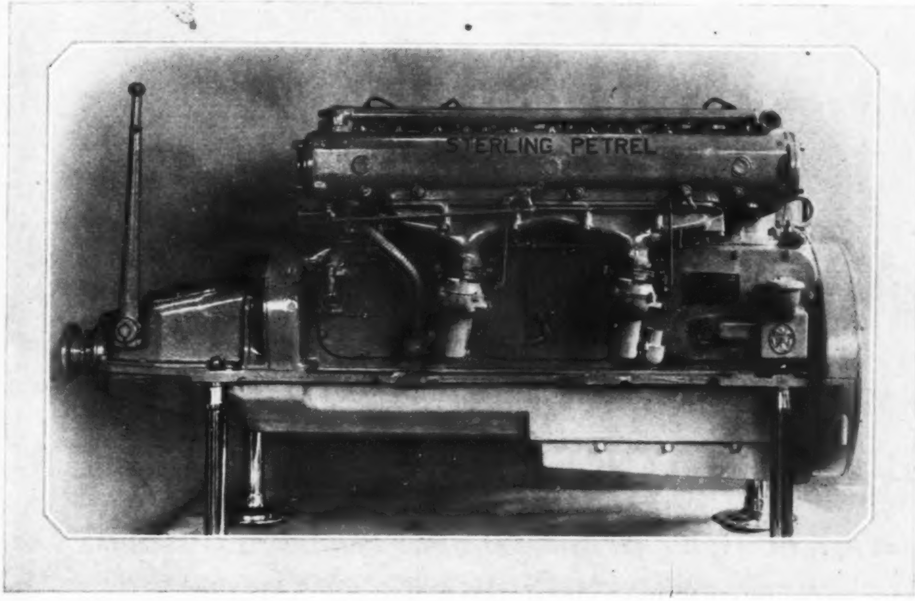
The new Scripps Model 120 is best described as a medium duty edition of the now famous Model 124 and is offered in answer to the demand for a small powerful six incorporating all of the features of the latter but attuned to full load operation at from 1,800 to 2,000 r.p.m. for installation in small cruisers and the like. With the exception of timing

(*Continued on page* 484)

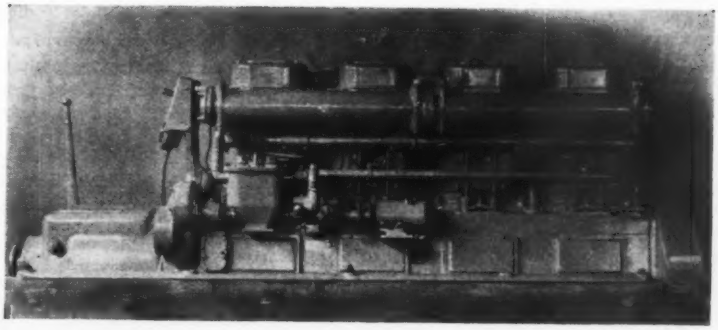
HIGH POWER GASOLINE ENGINES

Improved Sterling Petrel and Dolphin Engines for 1930

Produce More Power Than Ever

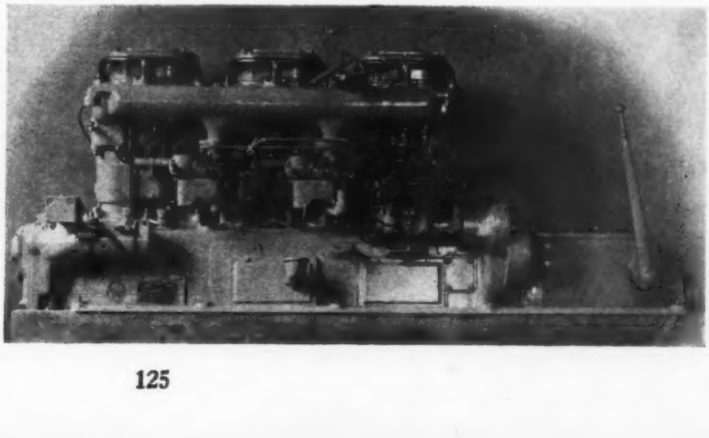


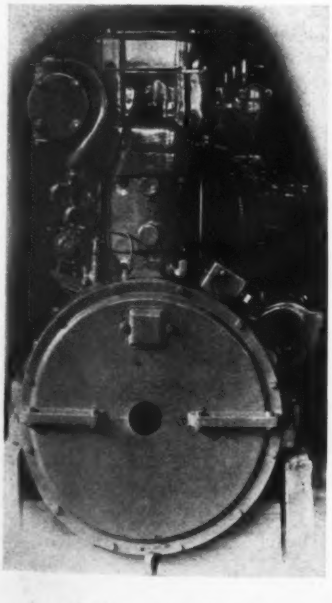
The six cylinder Sterling Petrel of 5¼ by 6 inch bore and stroke now is capable of delivering 200 horsepower at 2000 revolutions. This engine has been steadily improved and produces maximum power for its size



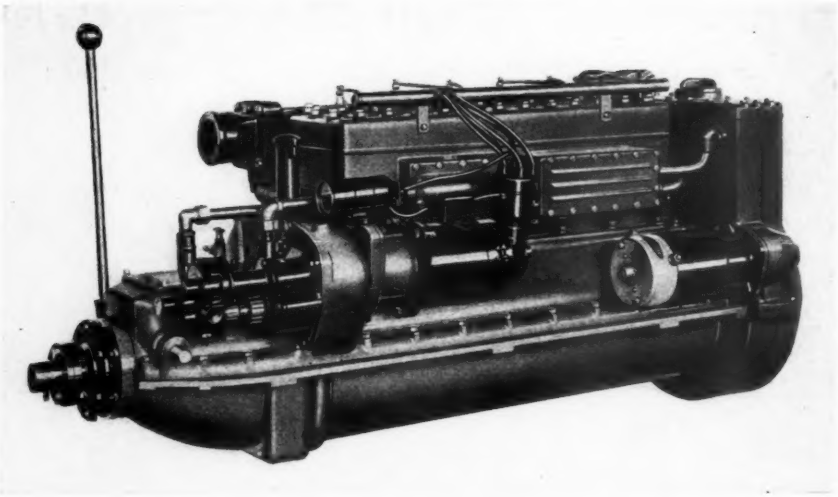
The Dolphin eight cylinder Sterling is a highly developed and powerful machine. It is fitted with a counterweighted and dynamically balanced crankshaft which permits very quiet operation

The six cylinder units are closely similar to the eights. They are characterized by large water jacket spaces which provide efficient cooling for valves and plugs and result in correct running temperatures without danger of overheating





An end view of the large size Sterling engines shows them to be most compact and well arranged. They are designed to fit into a minimum of space



The Six 88, and its companion the Six 77 represent the latest development in the line of Universal Sixes

BLUE JACKET, A NEW FOUR

A High Speed Light Weight Engine Designed Particularly to Meet the Needs of the Small Runabout in Weight and Power

THE Universal Motor Company of Oshkosh, Wisconsin, is making one of the most notable contributions of the season in its new Blue Jacket, a high quality, small, light motor.

The Blue Jacket has been developed, Universal officials state, after more than two years of study and experimentation in an endeavor to create a light motor, which would stand the punishment of high speed operation. It is designed to turn up as high as four thousand revolutions per minute, and develops forty-five horsepower in dynamometer tests.

Universal's long experience in the manufacture of four-cylinder motors indicated some time ago that there would be a large demand for motors of sufficient power to give high speed, and of sufficient lightness and compactness to make their use feasible in runabouts of from sixteen to eighteen feet in length—the type of boat for which heretofore little was available as motive power except the heavier types of outboards.

The perfection of such a motor has taken a long time, but the results are eminently worth the trouble and thought expended on them.

The Universal Blue Jacket is a three by three-and-a-half inch, four-cylinder, four-cycle motor employing some new principles of design and incorporating numerous quality features never before found in a small motor and rarely found in marine motors of any class. Despite its power and its completeness of equipment, the motor weighs but three hundred pounds and is said to be economical in operation.

The Blue Jacket is intended for installation either amidships or in the stern. As standard equipment it carries a Joe's reverse gear for the ordinary type of drive; and it is also available with a special one-way clutch for mounting in the stern in conjunction with one of the new inboard-

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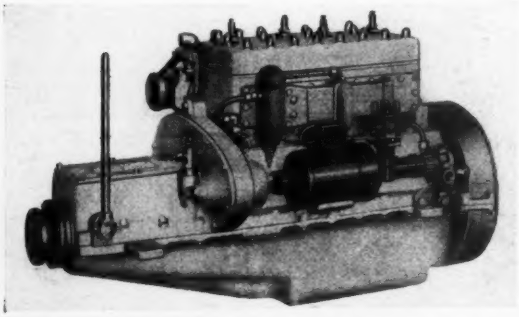
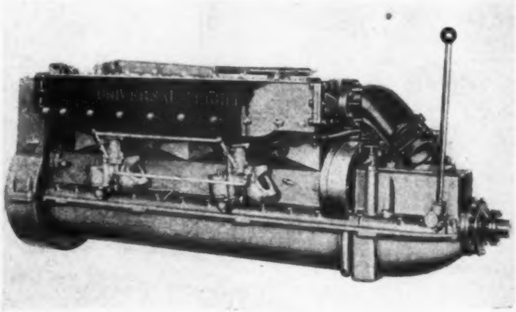
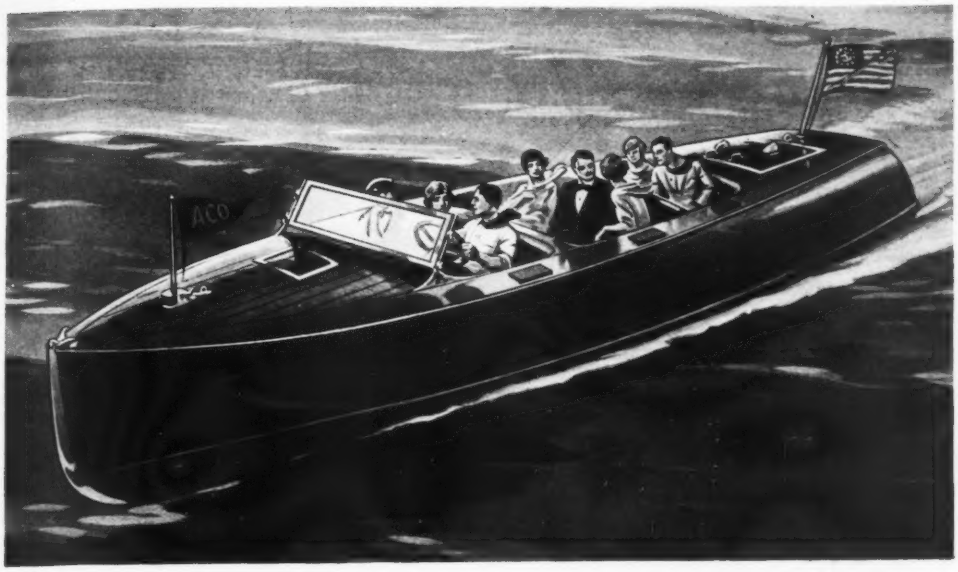


The new Universal Blue Jacket, a 45 h.p. high speed light weight four designed for the small runabout



The Universal eight has been stepped up to develop 115 h.p. and is compact in the extreme



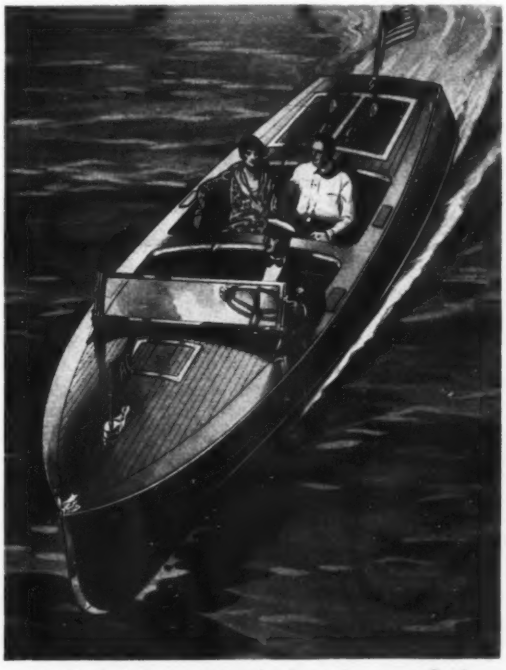
The 26-foot Aco Seaboat is the largest of the series announced by the Aeolian Company

CLASS IN SMALL CRAFT

A New Series of Smart Runabouts to Be Built by the Aeolian Company in Three Popular Sizes

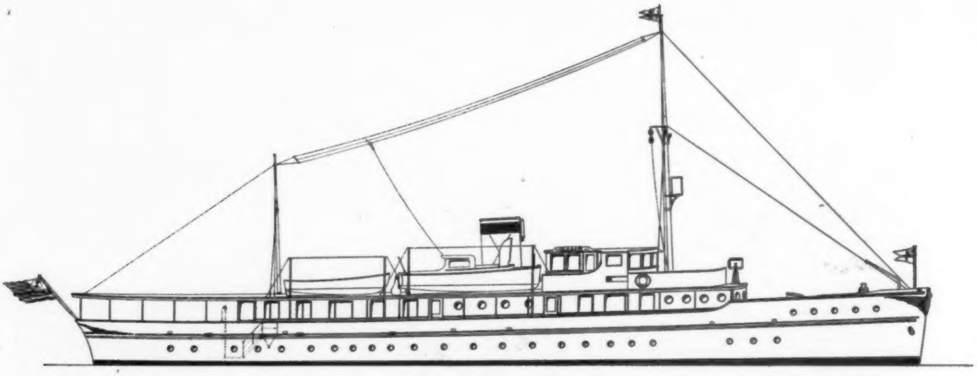
AN interesting announcement is that which tells of the entry of the Aeolian Company into the field of standardized boat construction. This company has long enjoyed an enviable reputation as builders of fine pianos and musical instruments. This naturally has provided them with a vast experience and background in the handling of fine woods and cabinet construction. They are undertaking the manufacture of a series of fast runabouts in 16, 20 and 26 foot lengths, at their large plant at Neponset, Mass.

Several years of experiment and test in charge of George F. Crouch and Fred W. Goeller, have produced interesting new forms of hull design which are stated to be superior in many ways to the usual types. Most interesting is the arrangement of the power plant which in all cases is in the extreme stern. The engine, so to speak, has been mounted backwards operating through an improved form of gear drive which handles the propeller in the accepted way. This method leaves the best central portions of the hull open for passenger accommodation, and the arrangement of these provides two cockpits which are close together, affording a maximum sociability to the passengers. Another advantage of this arrangement is that the fixed weights in the boat, that is engine and fuel supply, have been so located and supported that the boat will trim properly under all conditions. The variable load, consisting of the passengers being placed amidships will not affect the trim of the boats so that they will operate on their design lines under all conditions.



In all of the boats the engine is at the stern affording maximum space for passenger accommodation

The novel hull design provides a boat which is smooth running and easy riding. The bottom lines are such that the hull presents no flat surfaces against which waves might strike causing the jolting often experienced. The action of the boats throws the spray in a flat sheet well clear of the boat.



A 143-foot 21 knot cruiser design, which has excellent accommodations for day and afternoon runs as well as for extended voyages

DIESEL YACHTS—WHAT KIND?

The Naval Architect's Responsibility in Correctly Advising His Clients on Type and Style of Craft Most Suitable to Their Requirements

By THOMAS D. BOWES, M.E.

THE possibilities in a modern yacht that have been opened up by the development of the diesel engine are so great that we are only just beginning to realize what may be accomplished. With such possibilities at hand, the responsibility placed upon the naval architect is greater than ever.

In designing a yacht for a client, the naval architect is in a different position than when designing a commercial vessel for a client. The owner of a commercial vessel has the vessel built to meet certain rigid conditions that he is absolutely familiar with. This fixes many of the qualities and details of the vessel, so that the naval architect has very little latitude in what he may do.

The condition existing with the design of a yacht is entirely different. The average owner is more or less familiar with the amount of accommodations that he will require for himself and his guests but that is about the most important point in his mind.

As a rule, he is rather hazy about what type of diesel yacht will best met his requirements. The reason for this is the fact that he has not crystallized his ideas in his own mind, for, as a rule, he has not the experience to guide him in making his selection that the commercial man has. It is a life work with him, while with the average yachtsman, it is an amusement that receives occasional thought. Naturally, he is not in a position to best state his needs.

For this reason, as stated above, the naval architect has to act in a two-fold capacity to best serve his client in the design of a modern diesel yacht. First, he has to help the owner decide what type and size diesel yacht will best meet his requirements. This he does, with the information his client gives him regarding the average number to be accommodated, where the diesel yacht will be used, the kind of sea conditions that must be met in that locality, the speed, the number of months in the year the boat will be used, the type and kind of finish he wishes.

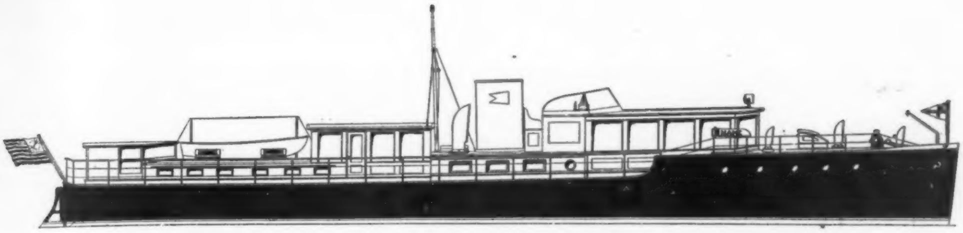
When all the information the owner can give the naval architect has been tabulated, he is then in a position to study the problem of just what size and type of yacht to advise his client to build. He draws on his own experience, the experience of other designers, and also of the commercial field to reach a decision.

When the type and size are fixed, the naval architect proceeds to perform his second function and designs what, in his estimation, will most nearly fit these conditions, making the necessary compromises between accommodations, speed, sea going qualities and beauty of appearance. How well he does this—depends on his technical training, experience and the use of such facilities as the Experimental Model Basin, Bureau of Standards, etc.

Now that larger power can be had in diesel engines of very moderate weight and dimensions, I believe the time is ripe for the designer to step out and produce faster boats of more moderate displacement, that can be handled with smaller crews, built for less money and maintained at lower cost.

The naval architects who specialize in the designing of yachts should be the leaders in their profession and not followers of the ones that design commercial vessels, as they are not handicapped by the restrictions that hamper the commercial designer in advancing the art.

Today we see the greater number of the diesel yachts of two distinct types, namely—those patterned after the commercial vessel of the small cargo knuckle stern type and those copied after the clipper bow steam yachts of a decade ago. Of course, there are a few exceptions to this statement and some of the newer, so called fast cruisers and larger diesel express yachts



One 85-foot twin screw design of 24 miles speed which has ample accommodations for week end and longer cruises

are a step, I believe in the right direction. Results that can be accomplished today could not have been accomplished two or three years ago. The power plants were not available then as they are today. The comparison that can be made in the change in the main diesel propelling plants of today, with those of a few years ago, is similar to that of the old type triple expansion, reciprocating engines and the modern, high speed, turbine with reduction gear or electric drive.

The first diesels I used, weighed about two hundred pounds per horsepower. Those we use today, where advisable, vary from fifteen to twenty-five pounds per horse power and are quieter, smoother running, cleaner and require but little attention in upkeep in yacht service.

I have seen lately some eight and twelve-cylinder diesel engines, in development, of 400 and 600 b.h.p., that will weigh less than 5 pounds per horse power and occupy only a fraction of the space our present engines occupy.

These would correspond to the turbine, in the steam age. With either reduction gears or electric drive, they should develop into ideal power plants for the smaller fast diesel cruisers. Such engines should give but little trouble, as they are of the ball and roller bearing type, two cycle, with no valves, and solid injection, of the Bosch type, without fuel valve cams, and rocker arms. Such motors lend themselves to pilot house electric control.

Let us consider the use the average American yachtsman makes of his diesel cruiser. He uses her for afternoon runs, day runs, week end cruises and a few and very rare longer cruises. I think it would be safe to say that of the time he owns the vessel 60 percent of that period, the yacht is laid up, or at anchor. Of the 40 percent. of the time she is operated, 60 percent. of the 40 is in afternoon runs and day cruises, 35 percent. of the 40 in week end cruises and 5 percent. of the 40 or less in extended cruises.

Of course, we all have in the back of our minds, the idea that some day we are going to take a long holiday and go to the South Pacific or cruise around the world in our own boat but citizens of the United States, with very few exceptions, never do. We are not built that way. Nevertheless, we are always considering the possibility of building our new boat to meet this condition and making her less useful for the other nine hundred and ninety-nine times she will be used.

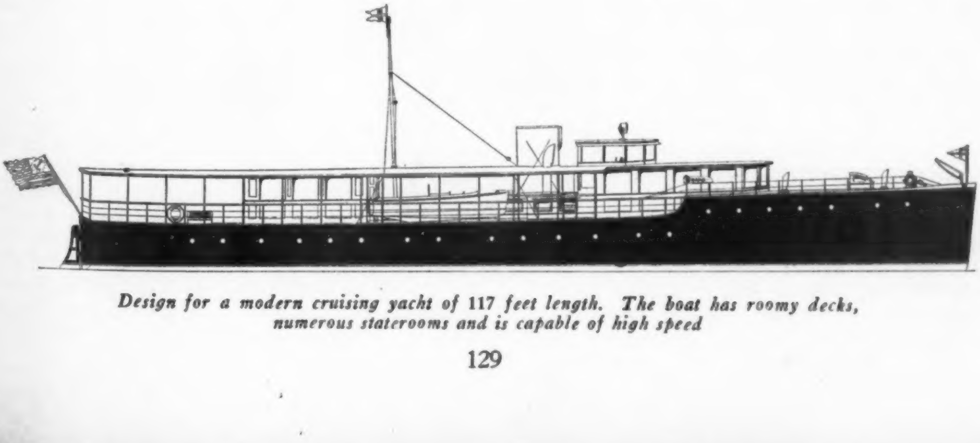
To my way of thinking, it is like getting a ten-ton Mack truck to drive around in, because some day we may want to move our abode elsewhere. How much better a 4,000-pound sedan would fit our usual uses and hire a truck when we needed it. The same is true with a yacht. Build what we need for our service and charter the one we might need for the unusual service.

I expect to see in the immediate future, a great development, by yacht designers, in a more modern type of diesel yacht that will be capable of speeds from 20 to 30 knots, moderate in displacement and draft, good sea boats, large deck space and deck accommodations, good cruising accommodations, that will cost less to maintain than our present type.

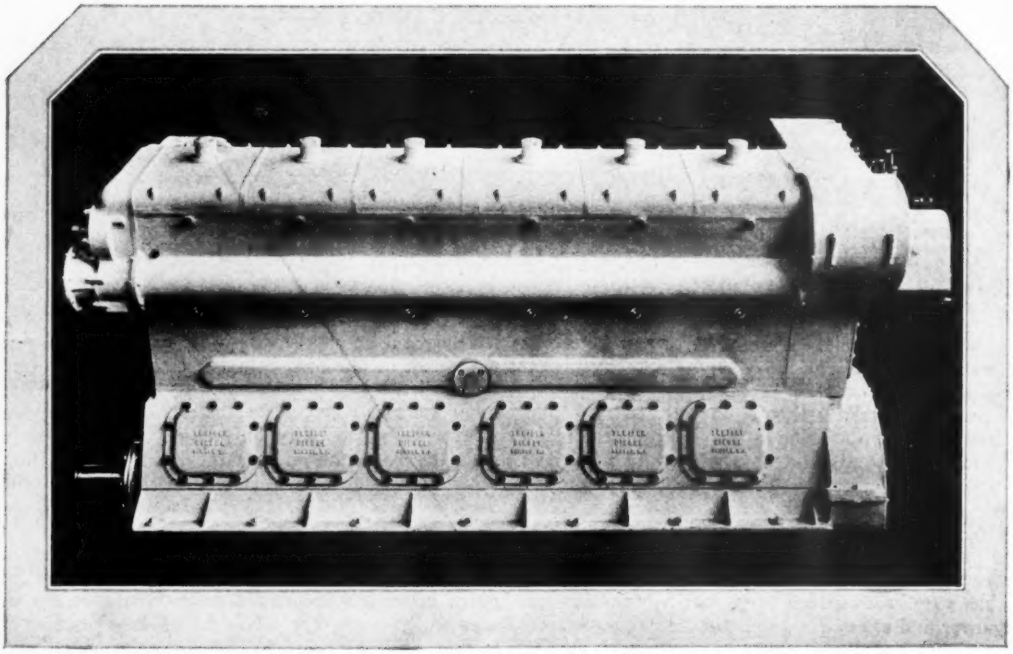
The only way this can be accomplished is by real, scientific research engineering work, which will never be accomplished by copying and slightly modifying present stock designs. This means lots of hard work for the naval architect but the one that obtains these results first, will be busy for a long time.

There is no reason for copying the present style and type. Sometimes we hear the excuse used that certain bows and sterns are used for the sake of beauty, but you can make up your mind that whatever meets the requirements of being the best adapted to its purpose, will surely be eventually regarded as the most beautiful.

It is like the whip socket on the automobile in the old days. So we might as well make up our minds to get the greatest water line length for a given size of yacht, as water line length, speed and power are all closely related to each other.



Design for a modern cruising yacht of 117 feet length. The boat has roomy decks, numerous staterooms and is capable of high speed



One of the larger sizes of Treiber air-starting diesel engines. These are 12 cylinder V-types from 300 to 3000 h.p.

A COMPACT DIESEL ENGINE DESIGN

Comprehensive Series of Marine Engines Built by the Treiber Diesel Engine Corp. to Meet Every Condition of Service

AN interesting and modern series of diesel engines are those now being built by the Treiber Diesel Engine Corporation in the plant of the New York Shipbuilding Company, Camden, New Jersey.

Their engines are of the four cycle, solid injection, cold starting type, built in size 65 to 3000 h.p. By skillful application of the very latest developments in metallurgy, excessive and unnecessary weight has been eliminated, resulting in an engine that scales about one-sixth the weight and occupies about one-third the space of ordinary diesel engines. The compactness of Treiber diesels has not, however, been achieved at the sacrifice of accessibility, as overhauling, cleaning and repairing are relatively simple tasks.

The base is made of the finest grade of aluminum casting. Into the fabrication of the crankshaft goes only the best alloy steel, heat-treated and carefully finished to precision standards. It is hollow-bored to eliminate unnecessary weight and provide for lubricating the crankshaft bearings. These bearings are made of steel shells, lined with the best grade of tin base babbitt, without the use of anchor grooves. Laminated shims are provided throughout for taking up wear, should this ever be required. Connecting rods are of drop forged alloy steel, heat treated pistons are of aluminum. Cylinders are made of high-strength nickel iron, unusually hard, and lapped to final dimensions, leaving a very fine mirror finish. The water jackets and cylinder heads are of high-strength nickel iron. The finest alloy steel obtainable is used for valves.

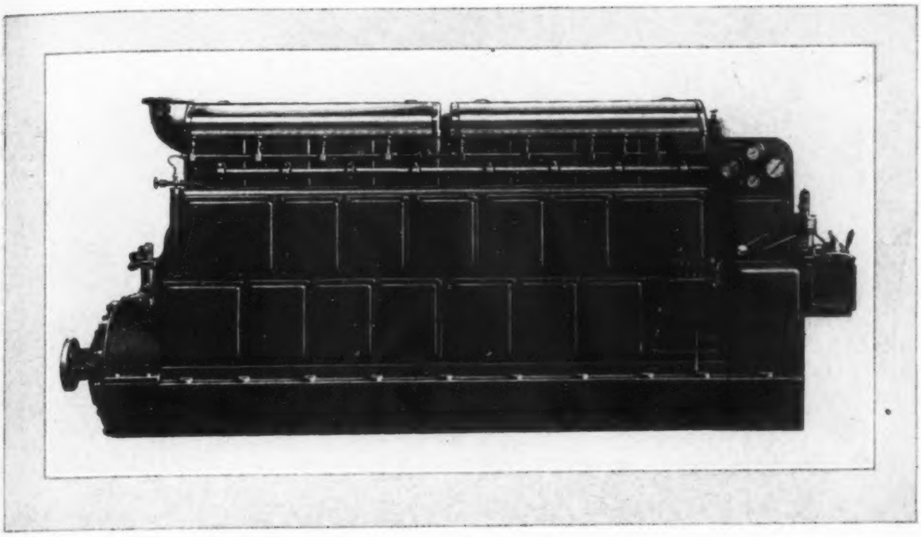
All these things contribute to reducing the weight of Treiber diesels and increasing their revolutions per minute, without increasing the stresses beyond ordinary practice. Generally speaking, Treiber diesels will average not to exceed 25 pounds per horsepower—special speed models, however, have been produced not to exceed 13 pounds per horsepower, a weight which is comparable with many gasoline engines.

The neatness of design of the Treiber diesel engine has created much favorable comment in the industry, showing conclusively that modern engineering principles skillfully applied by experienced engineers make possible the building of diesel engines that are as perfect artistically as they are efficient mechanically.

All Treiber diesels are designed to be inherently balanced. The reciprocating parts are carefully weighed and adjusted and all revolving parts are dynamically balanced to precision accuracy to give the best possible degree of smoothness in operation that can be obtained with internal combustion engines.

The smaller Treiber diesels (sizes ranging from 65 to 300 h.p.) are started with the aid of an electric motor in much the same manner that an automobile engine is started. They can also be started by hand cranking, using an exclusively owned patented device. The larger sizes are started by the use of compressed air.

No story descriptive of Treiber diesels would be complete without reference to the Treiber diesel engine electric generator sets, which today are adding to the pleasure and security of many yacht owners by enabling them to completely equip their craft with both main and auxiliary diesel engines.



Operating side of the F. P. 8 Cooper-Bessemer diesel engine

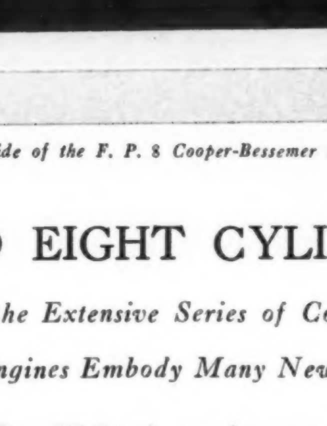
NEW SIX AND EIGHT CYLINDER DIESELS

Additions to the Extensive Series of Cooper-Bessemer Diesel Engines Embody Many New Features

IN announcing their new line of Type FP Diesel engines, The Cooper-Bessemer Corporation has again broadened its already comprehensive line of marine power plants and given to marine power users a power plant which exactly fills the need for a reliable light weight, multi-cylinder, moderately high-speed Diesel engine.

The Bessemer Type FP engines are built in both six and eight cylinder models and embody the latest features in proven engineering design, both in this country and abroad. These engines, like all Bessemers, are of the four-cycle, single-acting trunk piston type. They have a bore of 9 inches and a stroke of 12 inches, the six cylinder engine developing 200-300 h.p. at 400-600 r.p.m., while the eight cylinder engine develops 270-400 h.p. at 400-600 r.p.m. Special alloy pistons are used where speeds higher than 450 r.p.m. are required, permitting engine speeds up to 600 r.p.m. with a degree of smoothness that is remarkable. In fact, these engines have proved so smooth and vibrationless in their block tests that they have been run at full speed without bolting to their foundations.

Another feature of these engines is their completeness in every detail. All accessories are completely built in, including fuel and lubricating oil pumps, circulating water pumps, fuel transfer and lubricating oil transfer pumps and bilge pumps, all of the plunger type; compressor, duplex fuel and lubricating oil strainers and lubricating oil cooler. This building-in of all accessories makes each engine a complete unit which is perfectly balanced, compact, and symmetrical —an engine that is as pleasing to the eye as it is outstanding in its engineering features.

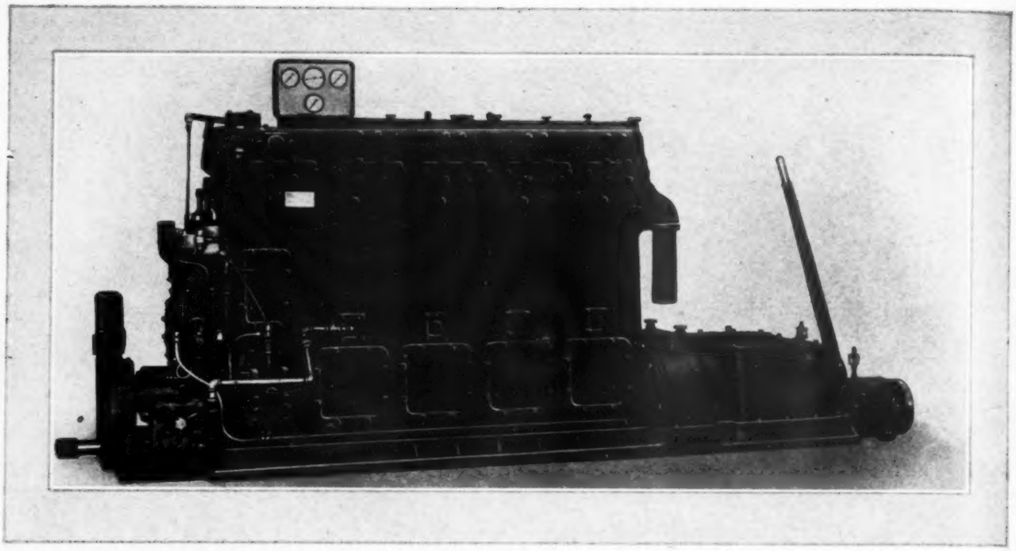


Forward end of the new Cooper-Bessemer diesel engine

These Type FP Bessemers embody the same construction features which have always characterized all Bessemer engines—namely, excess strength and precision machining which make for long, continuous service. The crankshaft serves as a typical example of this excess strength. It measure 6⅜ inches in diameter in both main and pins, insuring the engine a rigid backbone which makes for complete freedom from criticals at all speeds as well as for exceptionally long bearing life. Simplicity and accessibility and ease of operation have also been kept paramount in the design and construction of these engines, as unusual provision has been made for quick easy access to all moving parts, making it easy to adjust them or replace them whenever it may become necessary.

The base consists of a one-piece, extra-strong semi-steel casting, so designed that it can be made of aluminum where still lighter weight is desired. The centerframe, which

(Continued on page 160)



A four cylinder model L Fulton diesel engine of 155 h.p. at 700 revolutions fitted with reverse gear, compressor and bilge pump

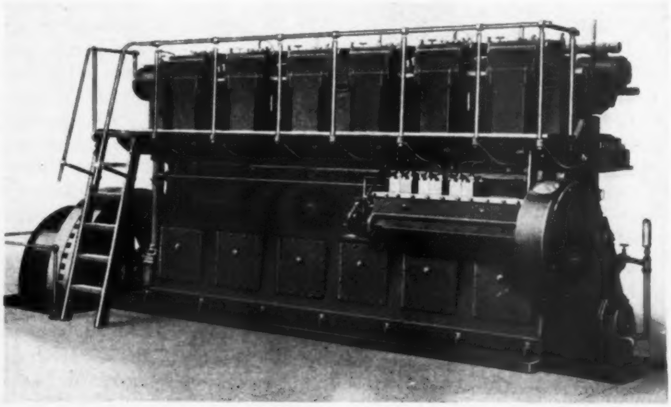
HEAVY DUTY DIESEL ENGINES

Durability and Long Life Built Into the Substantial Engines of the Fulton Iron Works

THE plant of the Fulton Iron Works Co. at St. Louis, Mo., and the more recently acquired Springfield, Ohio, plant are engaged in the building and development of full diesel 4-cycle engines of many sizes and types. The organization is at this time particularly active in the marine engine division, embodying principles of design that have been proven by years of engine experience and incorporating the very latest in modern practices.

Model L Fulton is a ruggedly built, moderately high speed engine and, although regularly sold to operate at 600 to 700 r.p.m., it has been run at much higher speeds with amazing satisfaction.

No attempt was made to build this engine to featherweight specifications, but rather to meet an ever-increasing demand for an engine having the stamina, durability and longevity of a heavy-duty engine, and at the same time have an engine speed which would better suit it to modern fast boats, using direct drive or the electric drive, which has been gaining interest. For this reason, Model L is admirably suited for generator sets used both for shore and sea duty.



The new model R R Fulton marine diesel develops 366 h.p. at 350 revolutions. This engine in 3 to 8 cylinders is directly reversible

Although the working parts, even the flywheel, are completely enclosed, they are instantly available for inspection and entirely accessible for adjustment and repair. Simplicity not only in design but also in operation has been the watchward.

Several exclusive features are found in Fulton-Diesel engines, such as removing cylinder heads without dismantling exhaust or intake manifolds. Neither is it necessary to retime valve settings after such operation.

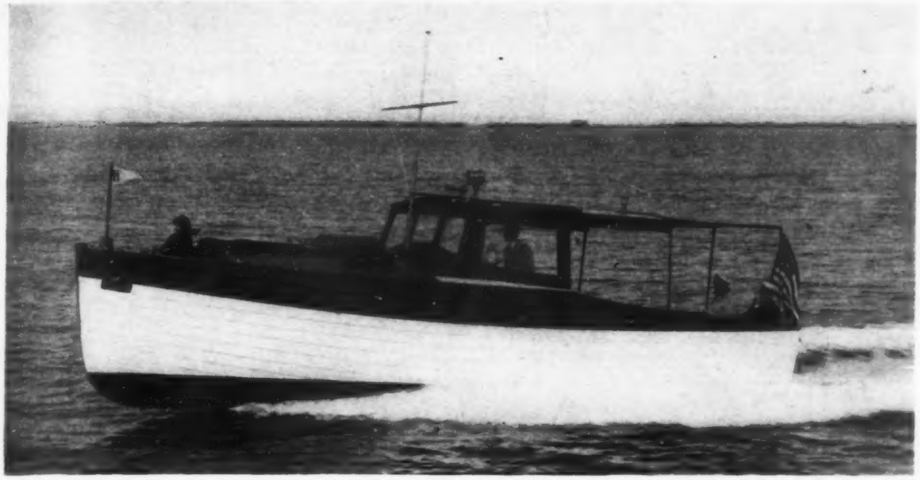
Another feature is the ability to advance or retard the injection of the fuel, which adds materially to the performance of the engine under varying conditions.

Cooling water and lubricating oil alarms are provided in case there is an impending difficulty in either department.

The solid engine frame, from bed plate to cylinder head, adds materially to the rigidity of the engine.

The water-jacketed air compressor and water pumps form an in-

(*Cont'd on p.* 482)



The 32-foot Banfield will be made in both single and double cabin styles

SEA GOING RUNABOUTS

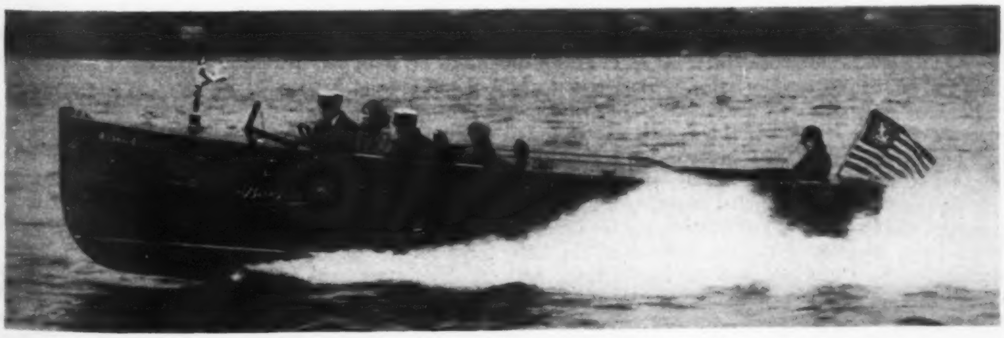
A Distinct Departure in Runabout Construction. Seaskiff Type with Lapstrake Mahogany Hulls in Two Sizes

A NOVEL type of runabout is the sea-going Banfield being built in 22, 26, and 32-foot sizes. These boats are a distinct departure from usual runabout types in that they follow closely the peculiar seaskiff construction which the Banfield company have employed so successfully in their 32-foot cruisers. These runabouts will have the same lapstake construction but will be finished in varnished mahogany. Their interior construction is unusually sturdy for boats of this kind since they have a two-inch spruce bottom, with white oak frames spaced six inches apart. The planking is hand riveted to the frames. Copper rivets are used throughout the hull while brass screws are used to secure the decks. Attached to the flat bottom and running the entire length of the boats are yellow pine shoes which act as a center board and protect the shaft and propeller from damage.

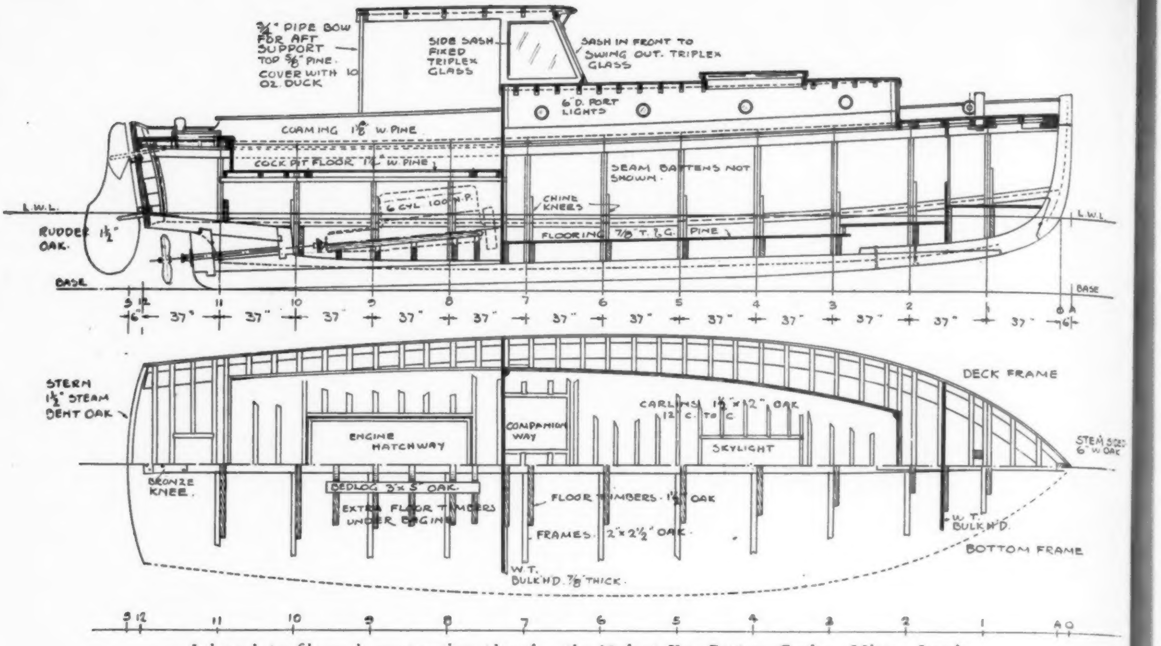
The 22-foot runabout is to be powered with a Gray marine engine of 72 h.p. while the larger 32-foot size will employ a Kermath engine of 200 h.p. which will drive the boats at approximately 25 and 33 miles.

Sedan types in 26 and 32-foot sizes will also be built with the same general construction as in the runabouts. The sedan top is of the permanent type with a windshield opening to a full horizontal position. Entrance will be at the stern through a sliding hatch. The construction follows the same heavy styles since the boats are designed primarily as deep sea boats able to withstand the roughest weather. These sedan runabouts will use 200 h.p. Scripps engines with approximate speeds up to 35 miles.

The double cabin cruiser which will be added to the line of Banfield boats will have several features which are new. The model has somewhat different arrangement from the De Luxe cruiser, particularly noticeable are the double berths in each cabin. In the bow, there is a sliding hatch with a companionway from the cabin. This is a great convenience in handling the anchor or lines, since it does not require going out on deck. The equipment supplied with the boats is most complete and includes practically every item which is on the market and which would be useful on board. The cruiser will be powered with a Gray Eight of 129 h.p. which will yield a speed of approximately 22 miles.



The 32-foot Banfield runabout is fast and able with 33 miles speed


¾" PIPE BOW FOR AFT SUPPORT
TOP ⅝" PINE.
COVER WITH 10 OZ. DUCK
SIDE SASH FIXED TRIPLEX GLASS
SASH IN FRONT TO SWING OUT. TRIPLEX GLASS
6" D. PORT LIGHTS
COAMING 1⅛" W. PINE
COCK PIT FLOOR 1¼" W. PINE
6 CYL 100 H.P.
SEAM BATTENS NOT SHOWN.
CHINE KNEES
FLOORING 7/8" T. & G. PINE
L.W.L.
RUDDER 1½" OAK.
BASE
9 12 11 10 9 8 7 6 5 4 3 2 1 0 A
6" 37" 37" 37" 37" 37" 37" 37" 37" 37" 37" 37" 37" 6"
STERN 1½" STEAM BENT OAK
ENGINE HATCHWAY
COMPANION WAY
CARLINS 1½"×2" OAK 12" C. TO C
SKYLIGHT
DECK FRAME
STEM SIDED 6" W. OAK
BRONZE KNEE.
BEDLOG 3"×5" OAK.
EXTRA FLOOR TIMBERS UNDER ENGINE
FLOOR TIMBERS 1½" OAK
FRAMES 2"×2½" OAK.
W.T. BULK'HD.
BOTTOM FRAME
W.T. BULK'HD. 7/8" THICK.
9 12 11 10 9 8 7 6 5 4 3 2 1 A 0

Inboard profile and construction plan for the 38-foot Vee Bottom Cruiser Mister Jarvis

MISTER JARVIS—A MASTERLY CRUISER

Structural Details and Hints on the Construction of a Fine 38-Foot Vee Bottom Cruiser of Seaworthy Type

PART II

Designed Especially for MoToR BoatinG

By WILLIAM ATKIN

UNDOUBTEDLY the V-bottom type boat is the easiest for the amateur to build. This kind of construction makes it possible to build without using a steam box, and this alone simplifies things. Then the form of the boat in being more or less straight-sided is far easier to plank.

Boat builders generally do not favor the building of V bottoms, perhaps because the type is newer than the old-fashioned round bilge hull. However, I believe that there are many advantages from a building standpoint in both types. It is likely that the thing resolves itself into whichever type the builder is accustomed to.

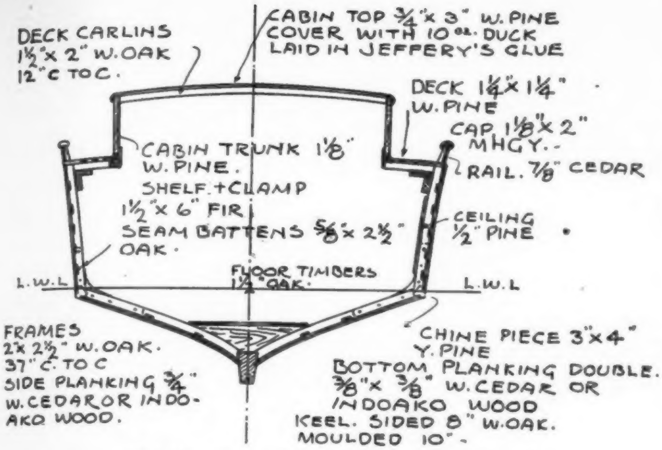
Some designs of V bottoms have very complicated construction plans. In these there is a mixture of cut and steam bent frames small in dimensions and closely spaced and which are very difficult to build.

The construction plans of Mister Jarvis show a simple and satisfactory way in which to build V-bottom craft. It will be noticed here that the frames are set on the stations: 37 inches apart, and are made to generous dimensions. Then battens are let into the frames on the topsides, while the bottom of the hull is planked with two skins, each ⅜ inches thick and laid with the inner layer running diagonally from the keel to the chine and the outer fore and aft. Figure 2 shows the way this kind of thing goes. The two battens inside the bottom planking are fitted for the purpose of stiffening the bottom planking between the frames. These being ⅝ inches thick give a total of 1⅜ inches straight through two places in the bottom.

As I have said often before in these pages it is a very necessary thing to lay the lines down full size and then to build the boat from this full size laying down plan. This is the only way in which to be sure that the boat when built will be like the plans.

The keel will be made from white oak sided 8 inches and moulded 10 inches. It must be in a single length and be free from bad knots, sap, and splits. In this boat because of the nearly straight rabbet line there will be very little deadwood; but what there is of it must be made from white oak to the same siding as the keel. Of course the after end of the keel will be gradually tapered so as to come to a nice easy round at the after end of the stern post. Two inches will not be too little. Galvanized iron drift bolts will be used for fastening the deadwood, stern post and keel together. These should be ⅝ inches in diameter and spaced about 12 inches center to center and all driven at angles to one another.

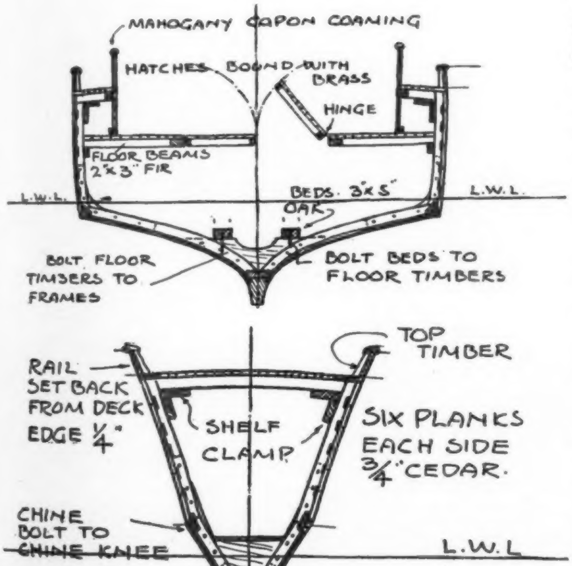
The stem will be made as shown sided 6 inches from white oak. An oak or hackmatack knee should be fitted as shown; this all to be through bolted with ½-inch galvanized bolts.


DECK CARLINS 1½"x 2" W.OAK 12" C TO C.
CABIN TOP ¾"x 3" W. PINE COVER WITH 10 oz. DUCK LAID IN JEFFERY'S GLUE
DECK 1¼"x 1¼" W. PINE
CAP 1⅛"x 2" MHGY.-
RAIL. ⅞" CEDAR
CABIN TRUNK 1⅛" W. PINE.
SHELF + CLAMP 1½"x 6" FIR
SEAM BATTENS ⅝"x 2½" OAK.
CEILING ½" PINE
L.W.L
FLOOR TIMBERS 1½" OAK.
L.W.L
FRAMES 2"x 2½" W. OAK. 37" C. TO C
SIDE PLANKING ¾" W. CEDAR OR INDOAKO WOOD.
CHINE PIECE 3"x4" Y. PINE
BOTTOM PLANKING DOUBLE. ⅜"x ⅜" W. CEDAR OR INDOAKO WOOD
KEEL. SIDED 8" W.OAK. MOULDED 10".

Midship construction section at station No. 5

The stern transom can be cut from white oak, using lumber about 3 inches thick; these crowned pieces being afterwards well spiked together or doweled with ½-inch galvanized iron rod. If a steam box is handy the stern planks can be bent over a suitable form and afterwards be rodded together and fastened with the cleating as shown in Figure 4.

The frames, of which there are eleven, will be made from 2 by 2½ inch white oak, the larger dimension being the depth. The best grade of white oak only should be used for the frames. At the chine corners the side and bottom frames are fastened together with ⅞-inch oak or hackmatack knees. Screws or bolts should be used for fastenings here. In cutting out the frames allowance must be made for beveling. The heels of the frames will be let into mortises in the side of the keel, and in addition by the floor timbers.


MAHOGANY CAP ON COAMING
HATCHES BOUND WITH BRASS
HINGE
FLOOR BEAMS 2"x3" FIR
L.W.L.
BEDS 3"x5" OAK
L.W.L.
BOLT FLOOR TIMBERS TO FRAMES
BOLT BEDS TO FLOOR TIMBERS
TOP TIMBER
RAIL SET BACK FROM DECK EDGE ¼"
SHELF
CLAMP
SIX PLANKS EACH SIDE ¾" CEDAR.
CHINE BOLT TO CHINE KNEE
L.W.L

Further construction details at station No. 8 above and station No. 1 below

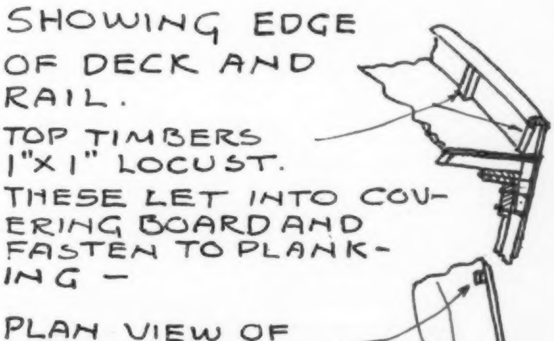
The floor timbers will be made from 1½-inch white oak as indicated on the construction plans. Each floor timber should be through bolted to the keel using one ⅝-inch diameter bolt to each timber. The frames will be fastened to the sides of the floor timbers with ¼-inch galvanized bolts three to each frame end. You must remember to cut limber holes through which bilge water can flow to the suction end of the pump. See Figure 8.

The chine logs will be made from 3 by 4 inch yellow pine and should be in a single length. This will be easy enough in yellow pine which is obtainable in long lengths. Yellow pine is a great wood for boat building anyway and is just about as good for keels and deadwoods as white oak, and it is considerably less in price too. The chine logs will be through bolted to the knees in the chine corner; use ¼-inch galvanized bolts here for fastenings.

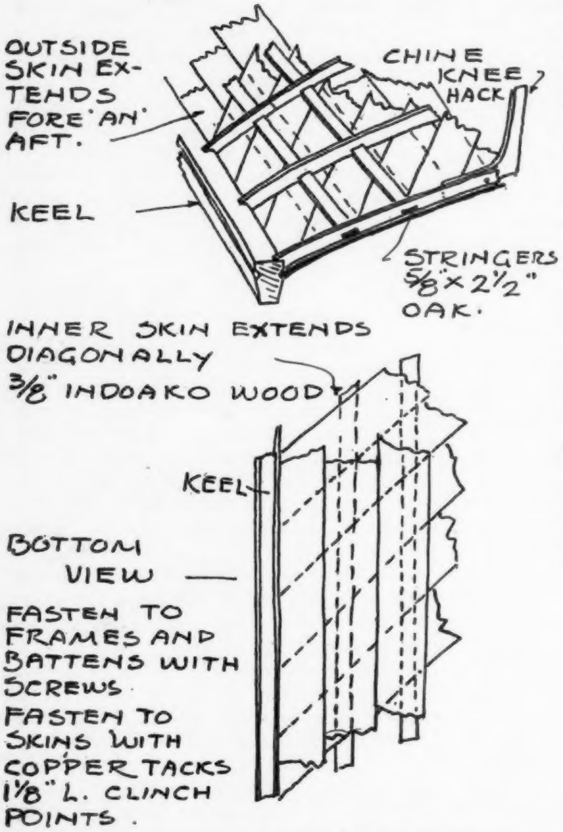
At the bow the chine log should be halved into the stem and screw fastened; and at the stern the chine should be let into the cleating piece only, screws should also be used here for fastenings.

The shelf will be made from 1½ by 6 inch fir and will be sawn to shape from the laying down plan. It will of course have to be made in three pieces, these being nicely scarfed together at Stations 3, and 8, or thereabouts. The shelf will be fastened to the heads of the frames with ¼-inch diameter galvanized bolts. The latter will have to be made up from rod using a clinch ring for the heads.

The clamp will be of the same dimensions as the shelf and bolted to the frame heads. Also the shelf will be fastened to the clamp, using galvanized wire


SHOWING EDGE OF DECK AND RAIL.
TOP TIMBERS 1"x1" LOCUST.
THESE LET INTO COVERING BOARD AND FASTEN TO PLANKING –
PLAN VIEW OF TOP TIMBERS
PINE WEDGES ARE DRIVEN AROUND TOP TIMBERS – THUS.
CUT OFF HERE

A detail showing the construction at the edge of the deck and the rail

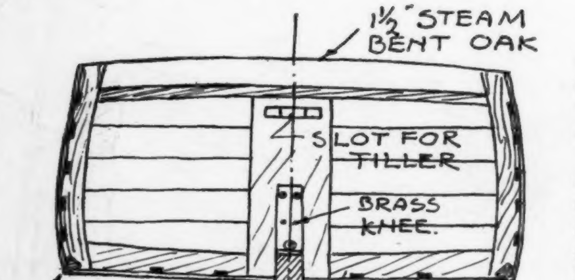

OUTSIDE SKIN EXTENDS FORE' AN' AFT.
CHINE KNEE HACK
KEEL
STRINGERS ⅝"×2½" OAK.
INNER SKIN EXTENDS DIAGONALLY ⅜" INDOAKO WOOD
KEEL
BOTTOM VIEW
FASTEN TO FRAMES AND BATTENS WITH SCREWS
FASTEN TO SKINS WITH COPPER TACKS 1⅛" L. CLINCH POINTS.

Details showing the method of applying the diagonal bottom double planking

nails driven through the shelf and into the clamp; these should be spaced at about 12-inch centers. The arrangement of clamp and shelf is shown in Figure 1.

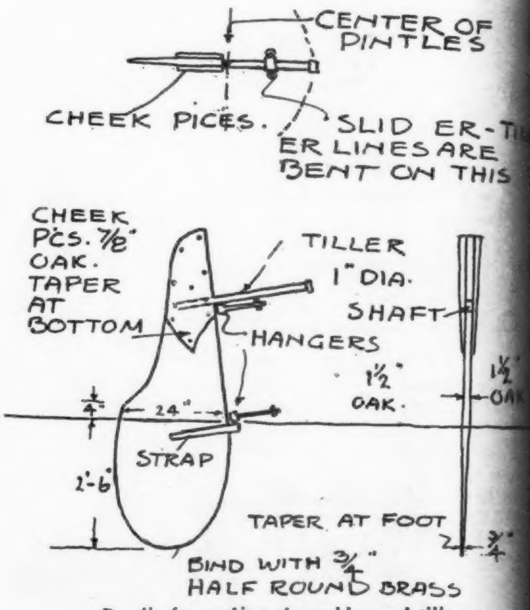
The seam battens will be made from ⅝ by 2½ inch oak. There will be five to each topside and two each side in the bottom. The battens should be screw fastened to the frames with screws; two to each frame and placed so they will not interfere with the planking fastenings. They will of course be let in flush with the face of the frames.

The side planking will be made from white cedar or Indoako wood ¾-inch thick and laid six strakes to each side. The fastenings should be screws into the frames and the battens as well. The heads of the screws should be countersunk and plugged with boat plugs. In laying planking that has the seams battened the seams should be made a very close fit because it will not be necessary to caulk or putty these. I should advise painting the battens and the edges of the planks as they are applied with Jeffery's liquid waterproof glue. This preparation is the best thing made for the purpose.


1½" STEAM BENT OAK
SLOT FOR TILLER
BRASS KNEE.
CHINE LETS INTO CORNER.
ALL BATTENS LET INTO CLEATING-
1½"x4" W. OAK CLEATINGS — FASTEN WITH NO10 BRASS SCREWS —

A detail of the transom at the stern looking aft

The bottom planking will be made from ⅜-inch white cedar or Indoako wood and will be laid double. The inner skin must be neatly fitted along the rabbet and chine and will extend diagonally from the keel to the chine. It should be fastened with light galvanized wire nails. Use Jeffery's glue along the rabbets in the keel and chine logs. The outer skin will be laid fore and aft in the usual manner. As it is applied the surface of the diagonal planking should be coated well with glue. Use screws for fastening the outer skin these being amply long to reach through the diagonal layer and into the frames. Use screws along the two battens in the bottom and copper nails, clinched, between the two skins. Indoako is the ideal wood for use where double planking is employed. It is strong, will stand up well, and does not absorb water easily. Figure 2 gives some details for laying double diagonal planking.


CENTER OF PINTLES
CHEEK PICES.
SLID ER-TI ER LINES ARE BENT ON THIS
CHEEK PCS. ⅞" OAK. TAPER AT BOTTOM
TILLER
1" DIA.
SHAFT
HANGERS
1½" OAK.
1½" OA
4"
24"
STRAP
2'-6"
TAPER AT FOOT
2
¾"
BIND WITH ¾" HALF ROUND BRASS

Details for making the rudder and tiller

The flooring should be made from ⅞ by 3 inch tongue and groove fir or white pine. There must be openings left along the center through which to get at the bilges and in making these allow lots of clearance because the wood always swells badly here. The flooring will be fastened with wire galvanized nails.

In the way of the engine beds it will be necessary to fit several additional floor timbers as shown in the plans. These will be made from 1½-inch white oak and will be bolted to the keel like the rest of the floors. Fastening through the planking at the bottom battens will also be required; the latter should be galvanized iron screws.

The engine beds will

(*Continued on page 138*)

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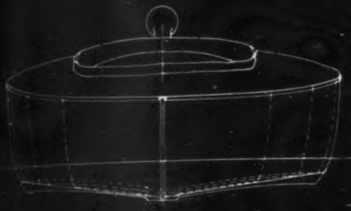
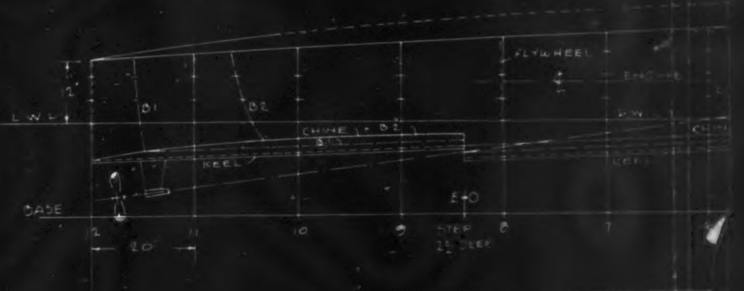
138)

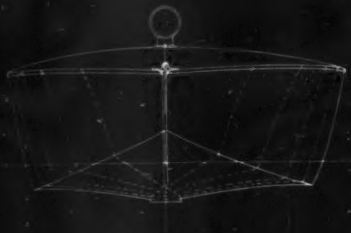
MoToR BOA

INTERNATIONAL 20 FOO

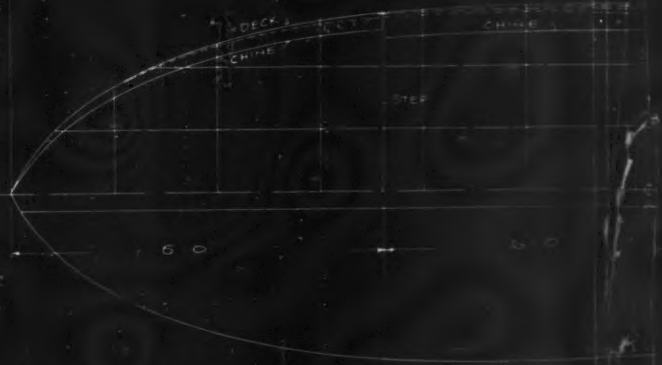


STERN VIEW





BOW VIEW



Scale: ⅜ In. = 1 Ft.

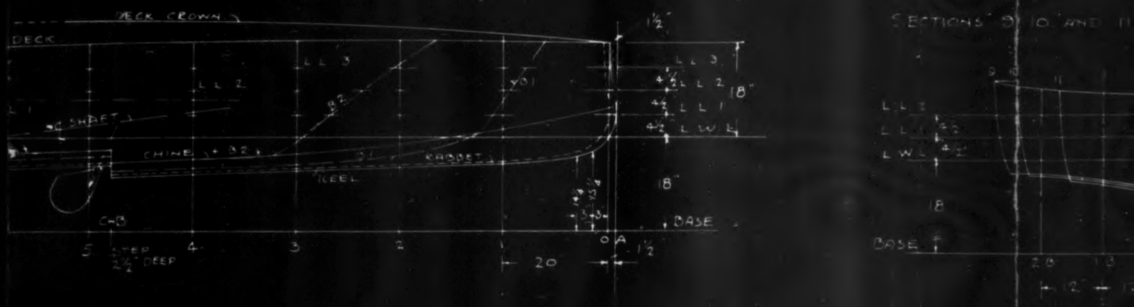
TABLE OF OFFSETS NO. 241 - INTER'L 20 FT 335 CU. FT CLASS RUNABOUT

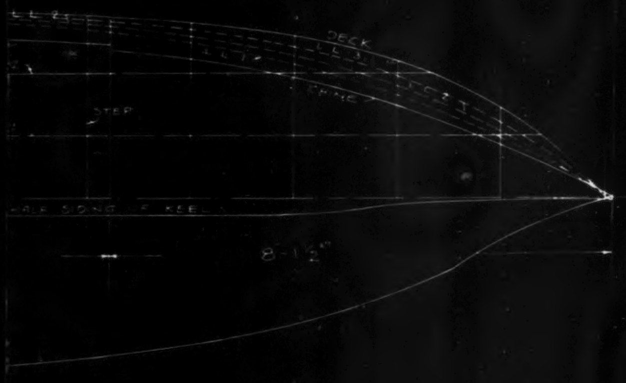
STATION	A	0	1	2	3	4	B	C	5	6	7	8	D	E
← HEIGHTS →														
L.W.L. TO SHEER		1-6	1-6⅞	1-6⁷⁄₁₆	1-6½	1-6⅜			1-6	1-5½	1-4⅝	1-4⅛		
SHEER TO ℄ DECK CROWN			0-1½	0-2⅝	0-3⅜	0-4			0-4⅜	0-4⅝	0-4⅝	0-4½		
BASE TO B2				1-4⅝	1-2¾	1-1¾	1-1¼	2-3¾	STRAIGHT TO				1-1¼	2-3¾
" " B1			2-0¾	1-2⅝	1-0¾	1-0¹⁄₁₆	0-11⅝	1-2½		"	"		1-0	1-2½
" " CHINE		1-11½	1-6½	1-4⅝	1-2¾	1-1¾	1-1¼	2-3¾		"	"		1-1¼	2-3¾
" " RABBET			1-1¼	1-0¾	STRAIGHT		0-11	1-1¼		"	"		0-11	1-1¼
" " KEEL			1-0¾		"		0-10½	1-0¾			"		0-10½	1-0¾
" ℄ SHAFT						1-11				"	"			
← HALF BREADTHS →														
DECK		0-0⅛	1-5¼	2-2¼	2-6¼	2-9¾			2-11	2-11¾	2-11¾	2-11		
L.L. 3			1-2½	1-11½	2-5⅛	2-8⅞			2-10¼	2-11¼	2-11⅛	2-10⅝		
L.L. 2			1-0¾	1-9½	2-3⅜	2-7			2-5½	2-10⅜	2-11	2-10½		
L.L. 1		0-0½	0-11½	1-8¾	2-1¾	2-5¾			2-5¾	2-10	2-10½	2-10½		
L.W.L.		0-0⅛	0-8	1-6¼	2-0¼	2-4			2-6½	2-8⅛	2-9	2-8¾		
CHINE	0-0⅛	0-1	0-10⅛	1-5½	1-11¼	2-2¾	2-4⅜	2-5½	2-5⅞	2-6¾	2-6⅝	2-6	2-5⅞	2-7¼
HALF SIDING KEEL														

DIMENSIONS IN FEET AND INCHES - TO OUTSIDE PLANKING -

ATINGS Build A Boat Seri

T·U·S·A· 335 cu.in. CL


DECK CROWN
DECK
L L 3
L L 2
L L 1
SHAFT
B 2
B 1
CHINE
RABBET
KEEL
C-B
5
STEP 2½" DEEP
4
3
2
1
0
A
20
1½
1½"
4½
L W L
18"
BASE
SECTIONS 9, 10 AND 11
9
10
11
L L 2
L L 1
L W L
4½
18
BASE
2 B
1 B
12

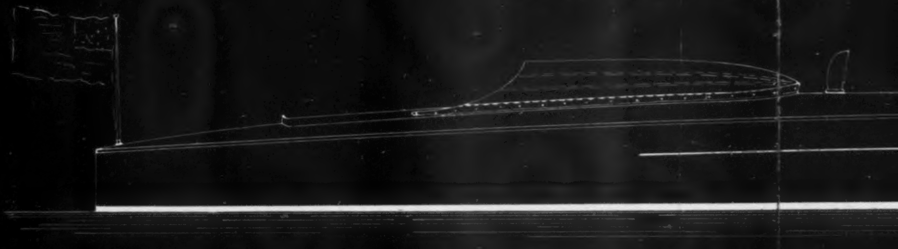

L L 2
DECK
L L 3
L L 1
CHINE
STEP
HALF SIDING OF KEEL
8-1½"

DESIGNED ESPECIALLY FOR

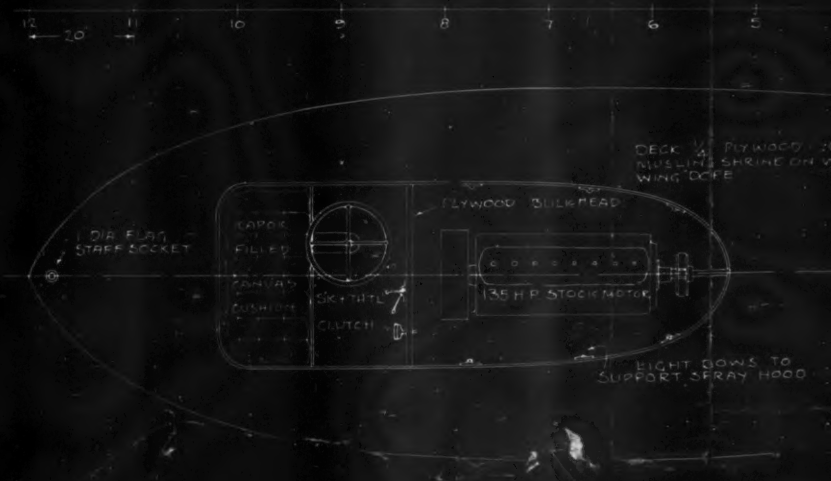
MOTOR BOATING

By

WILLIAM ATKIN



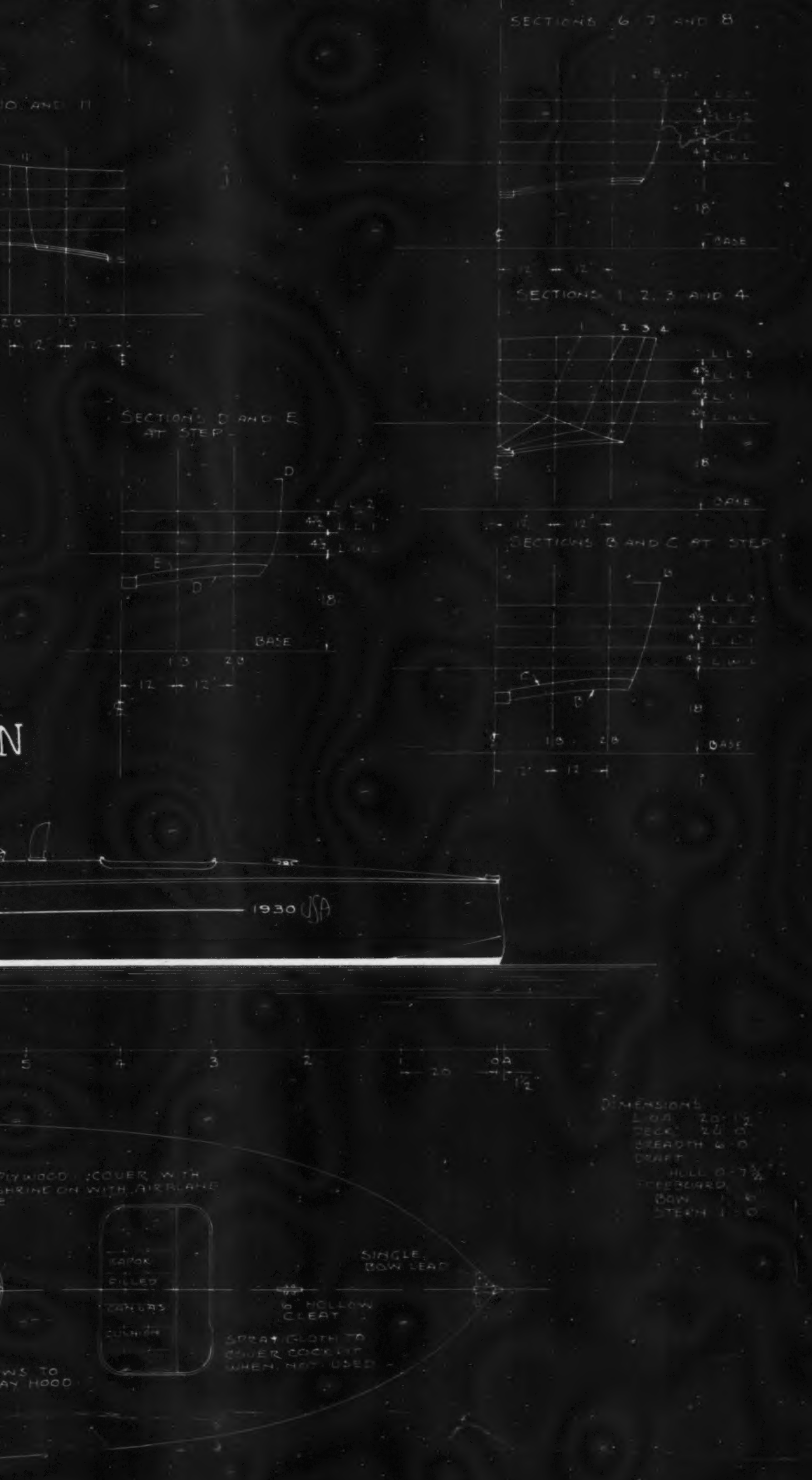
	10	11	12
¼	1-2⅛	1-1⅛	0-12
¾	0-3	0-1¾	-0
⅜	1-2⅞		
TRAIGHT		1-0¾	
⅜	1-2⅞	1-1¾	0-11
RAIGHT			0-11
			0-10½
			1-0
⅛	2-4⅝	1-8¾	0-0¼
⅛	2-4⅝	1-8¾	0-0¼
9/16	2-4½	1-8½	0-0¼
¼	2-4	1-8¼	0-0¼
⅛	2-3⅛	1-7½	0-0¼
⅛	2-2	1-6¼	0-0¼


12
20
11
10
9
8
7
6
5
1 DIA. FLAG STAFF SOCKET
KAPOK FILLED
CANVAS CUSHION
SKYTHTL
CLUTCH
PLYWOOD BULKHEAD
135 H P STOCK MOTOR
DECK ¼ PLYWOOD
MUSLIN SHRINE ON
WING DOPE
LIGHT BOWS TO SUPPORT SPRAY HOOD

eries

CLASS RUNABOUT

N


SECTIONS 6, 7 AND 8
SECTIONS 1, 2, 3 AND 4
SECTIONS B AND C AT STEP
SECTIONS D AND E AT STEP
10 AND 11
L.W.L.
BASE
18"
12"
1930 USA
DIMENSIONS
L.O.A. 20-1½
DECK 20-0
BREADTH 6-0
DRAFT
HULL 0-7¾
FREEBOARD
BOW 1-6
STERN 1-0
PLYWOOD COVER WITH
SHRINE ON WITH AIRPLANE
KAPOK
FILLED
CANVAS
CUSHION
SINGLE
BOW LEAD
6" HOLLOW
CLEAT
SPRAY CLOTH TO
COVER COCKPIT
WHEN NOT USED
WS TO
AY HOOD

U. S. A., AN INTERNATIONAL FLYER

A Racing Design Prepared to Suit the Conditions of the New International 20-Foot 335 Cubic Inch Class

Designed Especially for MoToR BoatinG

By WILLIAM ATKIN

LAST March after the International motor boat race at Florida, several officials of the American Power Boat Association conferred with Sir Henry Segrave in connection with the formation of a new International restricted racing class. The idea in view was the production of boats that could be built at a moderate cost, that would be seaworthy, fast, and comfortable.

Rather than making the thing a one design class, and one design classes are never entirely satisfactory, the following simple rules were formulated.

Competing boats must be powered with one of the following motors:

Chrysler ......6 cylinder 3⅝ by 5 inch 309.6 cu. in.
Gray.......8 cylinder 3⅜ by 4½ inch 322.2 cu. in.
Scripps........6 cylinder 3¾ by 5 inch 331.8 cu. in.
Lycoming ...8 cylinder 3¼ by 4½ inch 298.8 cu. in.

European motors which qualify will be added to the above list at a later date.

The owner must furnish to the local Race Committee, an affidavit signed by the engine manufacturer, specifying that the maximum horsepower developed by the motor can in no case exceed 135 horse power. The motors which develop a greater maximum than 135 horsepower will not be eligible to compete. Motors shall be stock in every particular, with the exception that changes of carbureter, piston rings, spark plugs, steering and throttle controls, and self-starters will be permitted.

Boats competing in this class shall have a water line length of not less than 20 feet in racing trim. There shall be no other restrictions as to the hull.

The motors in competing boats shall be equipped with an efficient method of idling.

No form of mechanical supercharger or other auxiliary device shall be employed to increase the compression or volume of the cylinders.

There are some additional rules which concern the racing of this class but these have no bearing upon the form, equipment, or construction of the boats. MoToR BoatinG for September 1929 carried the complete racing rules for this class, and I would suggest that prospective builders look these up. They are reprinted at the end of this article.

Designing small high speed craft is a difficult business. You see there are so many little things that will upset the best laid plans. There is no assurance at all in just designing a boat out of a clear sky. She may look fine on paper and have a lot of trick curves and be a failure when afloat. Boats of this type have to be developments from preceding craft. And that is just what we have in U. S. A.

The name is not new nor the form of the hull. The first U. S. A.; and by the way she was the first fast boat I ever saw, was owned by H. L. Bowden and was a familiar sight on the Hudson River in 1904. The next was U. S. A., ex Irene, designed and raced in an early Harmsworth Cup race by John Sheppard of Essington, Penn. She was a fast one, but had bad luck somehow or other.

Our U. S. A. is after the manner of Wolf's Head whose photograph was shown in MoToR BoatinG for July this year. She has two steps and a sharp stern. U. S. A. is 20 feet 1½ inches overall, which in this boat is the water line length; 20 feet on deck; has 6 feet beam; and a hull draft of 7¾ inches. The freeboard at the bow is 1 foot 6 inches, and at the stern 1 foot. The sheer being a slightly hogged line. It seems to me that there is a great loss in speed in any kind of boat that travels at speeds of over 35 miles an hour where a square stern is used. Some consideration must be given the form of the boat above the water line. And while it is not practical to extend the hull aft so as to create a perfect streamline, it is sensible to smooth the thing off somewhat as shown on this little craft. These boats with sharp sterns are much stronger than square sterned craft and just about as easy to build. I think too, that this form is much the better in rough water or running along in the sea piled up by some other boat.

The cockpit is left open and is narrow. Instead of using wooden hatch covers over the motor I should use a canvas hood as shown. This is lighter. Also most of the time it can be left off entirely, and even while the cover is spread the motor is easily gotten at and this is a worth while feature. Use three bows made from light brass tubing for the frame of the hood. These are to fit into the sockets shown attached to the coaming as shown. The canvas hood should have five pockets into which to put ash battens; these will keep the thing from sagging between the bows. I should place the motor controls, instruments, etc. on the bulkhead. In a boat that bounces around like these little fast ones it is always good practice to arrange the engine controls so as to have as short leads as possible. Most folks like the regulation steering wheel best but for all that a vertical post wheel as indicated on the plans is best.

The driver's seat should be set low in the boat and have a deep kapoc filled cushion. I should slant the top of the seat after the practice of the automobile, and upholster the back, also with kapoc.

Any one of the four motors mentioned above can be used for power. Considerable weight will be saved if the motor is fitted with a one way clutch rather than with a full reverse gear. I believe the motor manufacturers will fix up a regular stock motor on special order. The use of a forward drive gear box is necessary. Weights will be too far forward otherwise. And if the motor is direct it will have to be so far aft that the angle of the propeller shaft will be excessive. I would not use a universal joint to accommodate the difference in angularity between the engine shaft and the propeller; rather a gear box made with beveled gears of the right kind. The Gray Motor Company make a gear box of this type which permits installing the propeller shaft at varying angles. The propeller shaft should be geared up and should turn at approximately 5,000 turns per minute, the motor will turn around 3,300. Using a 9-inch diameter propeller with 14-inch pitch should give the boat a speed of something better than 55 miles an hour.

The forward cockpit serves as a hatch over the gear box. The forward face of the cockpit seat acts as a panting beam and should be made from ¼-inch plywood. Plywood is not suitable to use outside; but is excellent material to use where it is partially protected like in the bulkheads, flooring, seats, etc.

For instance the deck of U. S. A. will be laid with ¼-inch plywood and then covered with heavy muslin. The plywood should have a coat of paint and after this has thoroughly dried the muslin should be stretched on and tacked around under the sheer moulding. If you use airplane wing dope on the muslin it will shrink and stick very tight to the paint. The dope can be painted over and makes a very hard and durable surface.

At the stem I should use a single bronze bow lead instead of the usual chocks, and a single hollow cleat for fastening the painter. Aft only a flag staff socket is required. The cowl ventilator will be needed and this must be well fastened to the deck otherwise it will be swept off. If the hull is painted white, decks black, and with trim of white cedar this little packet will have a distinction of her own. Bottom should be the regulation pot lead or composition thereof.

The propeller shaft comes through the hull at the second step and there should be a long bearing stuffing box inside the step here. Packing should be very loose in this; in fact when under way the bearing will not leak because of the suction. Use a single legged strut. Next month in Part II of this article I shall show a detailed drawing of the strut. The propeller shaft should be made from Everdur bronze and ⅞-inch diameter is more than ample.

The rudder post comes through just abaft the forward step and thus its post can run well down on the blade without causing a lot of resistance. The area of the rudder need not be large because these bow rudders are very effective.

In laying down the lines you will notice that the keel, buttock lines and chine lines repeat themselves in all three planes. Both steps are of the same depth and I figure that the planing surfaces are distributed correctly to support the weights as shown. A lot of care must be given the laying down of the lines to full size; you just cannot build a boat of this kind in a haphazard manner. You will also notice that the after and the middle planes are each 6 feet long. The table of offsets reads from the bow, stations A to B, this is the bottom of the first step. Then from C, the top of the first step to D, the bottom of the second step. Then from E, the top of the second step to 12, the stern. The keel is 6 inches wide and projects below the rabbet line ½ inch for the full length. Now the corner of the keel must be left perfectly square and sharp, do not round it off. Since the water flows aft and out from the center line of the keel the ½ inch step down from the keel to the planking serves as a reefing plane and saves a lot of surface friction.

The gasoline tanks, there will be two, will be installed either side of the engine and under the decks. They must be connected together with flexible tubing, in fact the whole gasoline supply line must be connected with this. Use Quadplex autopulse for gasoline supply. The fuel tanks will have to carry sufficient fuel for three heats of the races a matter of something like 70 miles all told.

The cost of a boat like this will not run into a very high figure. Without the power plant but with tanks, strut, shafting, all hardware, steering gear, piping, painting, and cradle U. S. A. can be built for $1,350.00. The motor will cost about $1,500.00 with gear box. This price would be for a cedar and mahogany hull well fastened and finished.

Next month I shall describe the building of the boat including detailed drawings of the strut, rudder, step construction, engine beds, and several other items of construction.

Those of you who contemplate building can secure blue prints drawn to a scale of ¾-in. to the foot, at moderate cost. Write the Editor, MoToR BoatinG, 959 Eighth Avenue, New York, N. Y., for particulars and for free circular describing books on boat building and designs.

(*Continued on page 202*)

MISTER JARVIS, A MASTERLY CRUISER

(*Continued from page 136*)

be made from 3 by 5 inch white oak laid on the flat. They will be through bolted to the floor timbers with ½-inch diameter galvanized bolts having their nuts countersunk so as to leave the top surfaces flat to take the engine base. Figure 5 gives an idea of the construction through the engine space.

The deck beams will be made from fir or yellow pine about 2 by 2 inchs and spaced as shown; that is two beams between each set of frames. There are several extra beams forward to better accommodate the bitts and the end of the deck house. The deck beam will be fastened to the shelf with bolts or galvanized screws. And into the heads of the frames with boat nails; the latter must have holes bored before driving. Just a snug driving fit.

The deck will be laid with 1¼ by 1¼ inch white pine bent either with the center line or with the deck line. It should be fastened with galvanized iron boat nails having heads covered with boat plugs. The edge of the deck will have a waterway laid with 1¼-inch mahogany or yellow pine, and there must be a king plank as shown in the forward deck and aft. The edge of the waterway will be screw fastened to the edge of the sheer plank. Seams must be caulked and stopped with Jeffery's seam glue.

The rail will be made from ⅞-inch cedar and fastened as shown in Figure 1. The top timbers can be made of locust or white oak. The locust is best. The top timbers are let through the waterway and are fastened to the inside of the planking with screws. Before the rail is fastened white pine wedges are driven around the top timbers so as to make a perfectly watertight joint. The rail cap will be made from 1⅛ by 2 inch mahogany. This should be rounded off as indicated.

The cabin sides will be made from 1⅛-inch white pine or Indoako wood. These will be fitted to the rabbeted sill and fastened with ¼-inch diameter rods made up into bolts. There should be at least eight of these bolts to each side. In addition to the bolts long screws should be driven up through the carlins and into the sides. The joint along the rabbet must be well coated with marine glue to assure perfect watertightness.

The cockpit floor beams will be made from 1½ by 3 inch fir and set on 12-inch centers. The flooring will be 1¼-inch white pine finished the same as the deck. There will be flush hinged hatches over the engine made in the manner

(*Continued on page 202*)

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A MONTHLY PRIZE CONTEST CONDUCTED BY MOTOR BOATMEN

Questions Submitted for the April Contest

1. Describe and illustrate a portable landing for small boats which may be taken up and stored during the winter.
(Submitted by E. F. C., Cambridge, Mass.)

2. What method have you found practical for finishing off and making water-tight the outboard end of a copper exhaust pipe?
(Submitted by W. B. M., Newburgh, N. Y.)

IMPORTANT FACTORS IN BOAT PAINTING

Many Considerations Enter Into the Boat Maintenance Problem. Most Important Are the Selection and Application of Paints and Varnishes

Answers to the Following Question, Published in December MoToR BoatinG

What are the important factors to consider in painting a boat satisfactorily and economically? Discuss briefly the various kinds of paints and varnishes to be used in hull, deck, cabin and inside fiinsh, describing the nature and special qualities of each.

PAINTS AND PAINTING BOATS

(The Prize-Winning Answer)

ALL the pages in this, the largest issue of MoToR BoatinG, could not do justice to the first part of this title, but it is not so much the composition and mixing of paints that concerns us. We are most interested in their proper selection and application. The paint manufacturers have made a special study of the compounding of paints and varnishes and tested their products under actual conditions, often carrying the tests to extremes until the material failed. The composition of the paint that you buy is based on the results of these tests and every can is exactly alike.

The painter is not in a position to improve on a reliable manufacturer's product, nor can he mix white lead and oil paint that will be as satisfactory. Many good painters are now using a manufactured paint base, tinting it as desired. The boat manufacturers use standard brands of paint products in finishing their boats. The small consumer of boat paints—the man who paints his own boat every season—judges the paint solely on how it stands up, throughout the season. He knows that good paint will still look well at the end of the season and will require only a thorough scrubbing and sanding before repainting.

Do not attempt to mix your own boat paint or have a painter mix it for you. Buy the best brand that you can find and stick to it. If there is nothing under it to cause trouble, you will be satisfied with the result, but even if properly applied over cheap paint, house paint, or even good marine paint of a widely different composition you will be disappointed. Good paint materials cost money and to stand up on motor boats, exposed to the weather as they are at all times, the paint must be composed of good materials only. This makes boat paints more expensive, but the value is in the paint and you are getting your money's worth. Let the wife use 10c store paint on the porch chairs, but when you paint the boat, use the best that you can buy. Don't let the dealer who has not what you ask for convince you that outside white is the same thing and just as good as yacht white.

Good paint improperly applied can not be expected to stand up. The surface must be clean and dry and the paint well rubbed and laid off even. The preceding coat must be allowed to dry thoroughly before another is applied. A light sanding with No. 0 sandpaper between coats is advised. Do not paint the deck or topsides on damp days or while the air is frosty. If you must paint on such days, rub over the surface with a cloth saturated with turpentine before applying the paint. A little dampness seems to make no difference in the application of antifouling bottom paints, nor in their wearing qualities. Use good brushes, not necessarily new ones, but brushes that are clean and not worn down to a stub or one sided. Old brushes that are not worn out can be cleaned and put in fair condition by soaking in paint brush cleaner and then washing in warm water and brown laundry soap. A brush that has been used in paint can not be cleaned so that it is satisfactory for varnishing, nor can a brush that has been used for bottom paint be used for the deck or topsides. It is best to have three sets of brushes and to take care of them. Between using brushes, keep paint brushes in linseed oil and varnish brushes in turpentine. Bore a hole through the handle and suspend them so that the bristles are covered without their touching the bottom of the vessel. When the job is finished, wash the brushes with soap and warm water until all paint or varnish is removed, press the bristles together in their original shape and, when dry, wrap in paper for next season's use.

Apply the paint from clean containers, not from any old can that you can pick up, nor from a quart can full to the brim. Thoroughly stir by pouring off part of the vehicle (oil and liquids) and paddling up the remainder, slowly adding the vehicle while stirring. Then pour from one can to another several times. Use from a can that is about half full. The stirring must be done before each coat and if any skin or dust collects, strain the paint through cheese cloth or an old silk stocking. In using varnish, remove from the original container only what you expect to use and do not return any unused varnish to the can.

CLEANING UP. After the winter covering has been removed, cleaning up is first in order. This work is important although often slighted. Open the ports and hatches and give the boat a good airing. For cleaning such wood work as is to be repainted use hot water, cotton cloths and Old Dutch cleanser or similar scouring powder and plenty of elbow grease, rinsing with clean water. This scrubbing is essential to a good paint job for paint applied to a dirty or greasy surface is sure to peel.

SMOOTHING THE OLD PAINT. Ordinarily it is not necessary to remove the old finish from either deck, topsides or bright work. If the paint is in fair condition and not blistered to any extent, smooth with No. ½ sandpaper held over a block of wood. Then fill the seams, dents or other bad spots with white lead putty or elastic seam compound. After filling the seams, etc., give the job a final sanding. Varnished work should be scrubbed and then smoothed with ground pumice and water or No. 00 sandpaper. Fine steel wool may be used if desired. Any puttying on varnished work must be done with putty, stained to match the finished color.

REMOVING OLD PAINT. If the old paint is blistered or cracked beyond smoothing up, it had better be removed. Either a liquid paint remover or a blow torch may be used. Always use remover on varnished work. Remover is particularly good for decks and horizontal surfaces, although it may be used on the sides as well. One or possibly two applications should be sufficient to soften the paint so that it can be scraped off with a putty knife. If you use a torch, always play the flame ahead of the scraper so as to not char the wood. More haste will make less speed. Allow the heat to thoroughly soften the paint and then take it off right down to the wood in one operation. After using remover or a torch on painted work, smooth with No. 1 sandpaper, fill dents and gouged out spots with plastic wood and seams with seam compound or white lead putty. Prime and then treat as in smoothing up.

INTERIOR. The interior does not need painting or varnishing every year. One good job on the interior should last for two or three years. After scrubbing and smoothing, give the interior two coats of spar varnish or yacht enamel. No varnish other than spar varnish should be used on a boat. Spar varnish is a pure gum varnish, with suitable vehicle and driers, while ordinary interior varnish used on buildings is compounded with rosins and other ingredients that do not give satisfactory service for boat use. Use yacht white, either flat or gloss, or marine enamel for a fine interior finish. Paint or enamel over varnish is not satisfactory. If the interior finish is changed, the varnish must be cleaned off with remover and the surface sanded before painting or enameling. Paint over a varnished surface will chip off very easily.

BRIGHT WORK. The bright work should be cleaned and sanded or removed to the wood, depending upon its condition. Several coats of varnish that have turned white in spots, that have checked so that fine hair cracks show all over the surface, or that are badly weathered should be removed. Unless the varnish is pretty well weathered use remover. There is nothing harder on the edge of a scraper than old varnish and the dull scrapers are sure to dig into the wood. Any discolored spots where the water has soaked into the wood may be bleached with oxalic acid, but be sure to wash the surface well with warm water after bleaching, and allow plenty of time for drying before varnishing. Some puttying will be necessary. A precaution essential to the good appearance of refinished bright work and one too often overlooked, is the matching of the putty to the wood. Use a little burnt umber and raw sienna for oak, and burnt sienna and rose pink for mahogany. When carefully mixed with the putty the color will render the putty inconspicuous. If staining is necessary to get an even color, use an oil stain, rubbing it well into the wood with a cloth. The rubbing also insures an even application. Apply not less than two coats of spar varnish, rubbed with ground pumice and water or No. 0 sandpaper between coats.

DECKS. Bright finished decks should be finished the same as other bright work. Not less than two coats of best spar varnish, rubbed between coats, is recommended. If the old finish is in good condition, two coats will be enough to brighten up and hold the deck over until another season. It is desirable that no more varnish be applied than is necessary to protect the wood for the given time.

A canvas deck in good condition needs only another coat or two of deck paint to restore its appearance for another season. Two thin coats of paint are better than one thick coat on any surface and still better on a deck which must withstand walking on. You do not want to get on so much paint that the deck will crack, necessitating the removal of the paint, but you must apply enough to protect the canvas and keep the deck looking well. Deck paint is especially prepared to withstand the hard service received and still remain flexible to a certain extent. A deck paint that is not flexible will soon crack or blister and must be removed before a good finish can be secured. It is better not to change colors in succeeding paintings.

TOPSIDES. Varnished topsides should be treated same as varnished decks. White paint is most desirable where the topsides are

(Continued on page 500)

RULES FOR THE PRIZE CONTEST

READERS are urged to consider the above questions for the April issue, and send answers to them to the Editor, MoToR BoatinG, 57th Street at Eighth Avenue, New York, N. Y. Answers should be (a) in our hands on or before February 25, (b) about 500 words long, (c) written on one side of the paper only, (d) accompanied by the senders' names and addresses.

QUESTIONS for the next contest must reach us on or before February 15. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

The names will be withheld and initials used.

The prizes are: For each of the best answers to the questions above, any article or articles sold by an advertiser advertising in the current issue of MoToR BoatinG of which the advertised price does not exceed $25 or a credit of $25 on any article which sells for more than that amount. There are two prizes—one for each question—but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of MoToR BoatinG of which the advertised prices does not exceed $5, or a credit of $5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.

KEEPING FUEL OUT OF BILGES

Suggested Installation of Tanks and Fuel Lines to Insure the Utmost Safety and Prevent Fuel Leakage

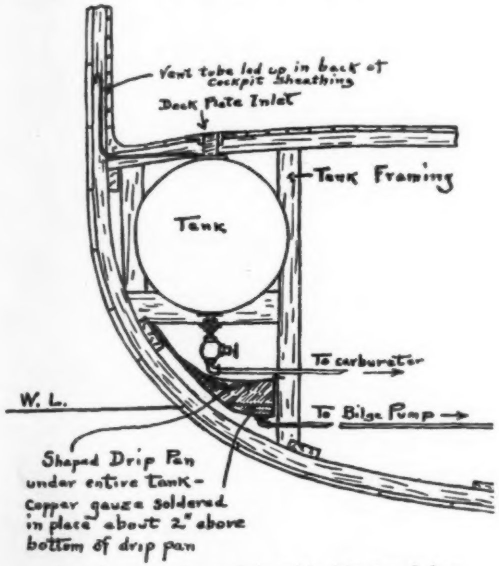
Answer to the Following Question, Published in December MoToR BoatinG

Explain and illustrate a practical fuel tank installation that will prevent gasoline from getting into the bilge

PRACTICAL FUEL TANK INSTALLATION

(The Prize-Winning Answer)

OWING to the fact that there are a number of different fuel tank installations, using one or more tanks, located either above or under decks, this article will cover each of the different installations under separate headings, and the accompanying sketches should make the various explanations understandable to everyone. Of course, there will be many cases, where the identical shape of tanks, or locations of them in the various hulls will appear different; however, the idea of how to prevent this common fire or explosion hazard from existing can be summed up in a few sentences, for instance:


Vent tube led up in back of cockpit Sheathing
Deck Plate Inlet
Tank Framing
Tank
To carburetor
W. L.
To Bilge Pump
Shaped Drip Pan under entire tank - copper gauze soldered in place about 2" above bottom of drip pan

A tank under the cockpit with drip-pan below

Pipe the tank inlet and vent tube so that tank cannot overflow into the bilge when filling.

Place drip pans under all tanks and any fittings close-up under tanks, with a protecting screen of copper gauze soldered inside to protect from any flame or spark, draining these drip pans by gravity or via bilge pump so that fuel leakage is carried overboard.

If possible, lead the vent tube as high as practical and to the outside, in order to keep escaping fumes (which are more combustible than fluid fuel) from any point under decks.

Solder each and every pipe fitting except the split of unions, the packing glands or valves and the removable trap on strainers, in order to prevent any leakage at these points. The primary consideration in running any fuel line should be to get away from low spots and any fittings possible, bending the pipe or tubing instead of using elbows, tees, forty-fives, etc.

Brace the tank in place with heavy timbers, so that it cannot possibly work loose or strain the seams and piping, either of which results in leaks and gasoline in the bilge. Place painted strips of canvas or strips of felt, soaked in shellac, between the tank and timbers, to prevent chafing or formation of rust.

Either run the tank inlet pipe well down into the tank, or solder a cone of sheet brass or copper into the tank cap, to prevent fuel from sloshing up around cap and leaking out.

Install a drip pan under the carbureter and adjacent pipe fittings, properly screened with copper gauze, making provisions so that it will not be upset accidentally but can be emptied occasionally or drained by suction to the intake manifold.

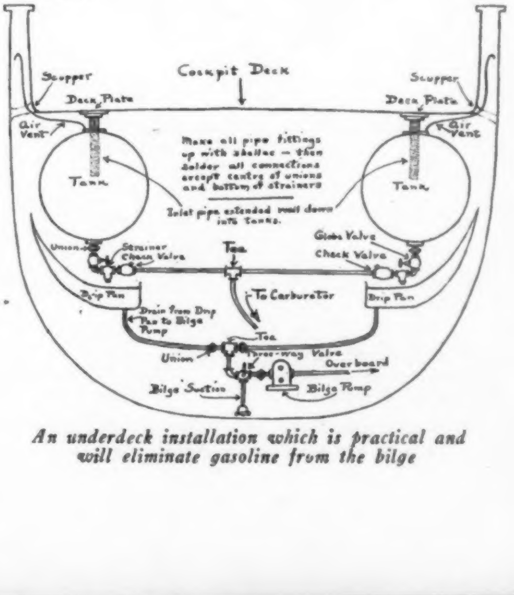
Install a copper gauze guard over the air intake of the carbureter unless it is piped to the base or to a hot stove around the exhaust manifold, to prevent danger from back-firing.

When the boat is lying idle for any period of more than a few minutes, close the fuel line valve close to carbureter, so that gasoline cannot flood in case the carbureter inlet needle valve (float valve) sticks open, allowing the tank to empty into the bilge.

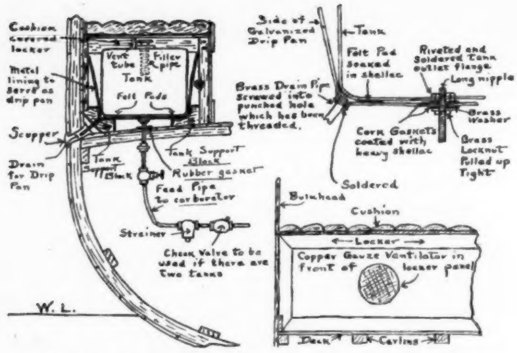
Where two or more tanks are used, all being piped into one main fuel line leading to the carbureter, use check valves close up under each tank, placing them so that fuel can run from each individual tank, but not back into it from another tank, in case the boat grounds and heels over at any excessive angle, which would cause the low tank to overflow through the vent tube or tank cap.

When tanks are installed under lockers in the cockpit, etc., leave ventilating hole, covered with copper gauze, in the front panels so that gasoline fumes from the vent tube or from around the filling tank cap will be carried off and not stay inside the lockers.

With these factors to be considered in laying out or correcting a defective tank installation, let's take up the different tanks systems in detail and see just what should be done to each in order to prevent any and all fire and explosion hazards from existing in your craft:


Cockpit Deck
Scupper
Deck Plate
Air Vent
Scupper
Deck Plate
Air Vent
Make all pipe fittings up with shellac — then solder all connections except centre of unions and bottom of strainers
Tank
Tank
Inlet pipe extended well down into tanks.
Globe Valve
Check Valve
Union
Strainer
Check Valve
Tee
Drip Pan
To Carburetor
Drip Pan
Drain from Drip Pan to Bilge Pump
Tee
Union
Three-way Valve
Overboard
Bilge Suction
Bilge Pump

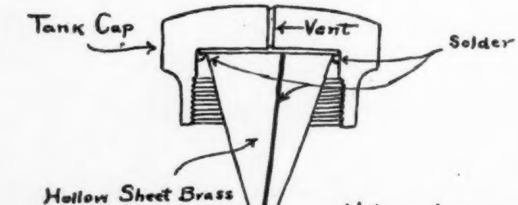
An underdeck installation which is practical and will eliminate gasoline from the bilge


Cushion covered locker
Metal lining to serve as drip pan
Vent tube
Filler pipe
Tank
Felt Pads
Scupper
Drain for Drip Pan
Tank Support Block
Tank Support Block
Rubber gasket
Feed Pipe to carburetor
Strainer
Check Valve to be used if there are two tanks
W. L.
Side of Galvanized Drip Pan
Tank
Felt Pad soaked in shellac
Riveted and Soldered Tank outlet flange
Long nipple
Brass Drain Pipe Screwed into punched hole which has been threaded.
Brass Washer
Cork Gaskets coated with heavy shellac
Brass Locknut Pulled up Tight
Soldered
Bulkhead
Cushion
Locker
Copper Gauze Ventilator in front of locker panel
Deck
Carling

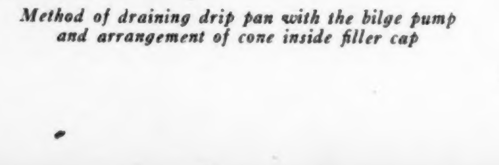
A locker enclosed tank on the cockpit deck

SINGLE TANK UNDER DECK

The illustration shows a single tank installed under the cockpit deck, on one side of the hull, the water tank being placed on the other side to balance the weight. The pipe fittings should be close up to and under tank. A drip pan is made of galvanized iron to extend under the bottom of the entire tank, with a copper gauze screen soldered into it about half way up from the bottom. In case there is no mechanically driven bilge pump installed, and one is not desired, run the drain pipe from the bottom of the drip pan to some accessible point, place a cock on end of pipe, and drain off in a bucket or pan and dump overboard at regular intervals. If there is a mechanically driven bilge pump on board, or where one is to be installed, pipe the drain from the drip pan to the pump, through a three-way valve as shown. Where strainers are used in the fuel line, place close to tank and over the drip pan. The filler pipe should be screwed into a female deck-plate, or run through a made-up deck-plate-stuffing-box, as illustrated. The vent tube should be soldered into the tank inlet flange and run up in back of cockpit siding to a point higher than the top of tank inlet pipe, bending the top of the vent tube over to keep dirt and water out. With this installation, bearing in mind that practically all cockpits are self-bailing, or should be, any overflow when filling the tank will drain overboard. Any leakage around the tank or its immediate fittings will be caught by the drip pan and disposed of through the bilge pump or by manual emptying. This should certainly keep the bilge clear of fuel.


From Drip Pan
Three-Way Valve
Bilge Pump
Overboard
Bilge Suction Strainer
Unions

Hollow Cone in Tank Cap.


Tank Cap
Vent
Solder
Hollow Sheet Brass or copper cone soldered to inside of filler cap
Hole in bottom of hollow cone

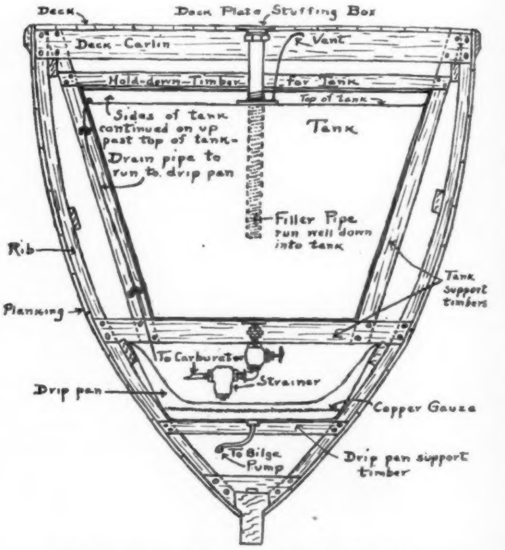
Method of draining drip pan with the bilge pump and arrangement of cone inside filler cap

DOUBLE TANKS UNDER DECK

This is the ideal under-deck installation, being practical and safe. The framing details are similar to that shown for the single tank under deck. The shape of those drip pans, as illustrated, are imaginary, as each will have to be shaped to fit your tank. Starting in at the tank inlet, notice the following features:

Copper tubing air vents soldered to tank inlet flanges and bent up in back of the cockpit siding, carried to a point at least six inches higher than the top of the inlet pipe, with the upper ends of the vent tubes bent over to keep out any dirt and water.

Deck-plates screwed down on filler pipes, which filler pipes extend well down inside of tanks. After tank and deck-plates are in place, solder is run around pipes where they are screwed through tank inlet flanges. *Tanks must be securely supported in place so they cannot work.*


Deck
Deck Plate Stuffing Box
Deck-Carlin
Vent
Hold-down-Timber for Tank
Top of tank
Sides of tank continued on up past top of tank-
Drain pipe to run to drip pan
Tank
Filler Pipe run well down into tank
Rib
Tank support timbers
Planking
To Carburetor
Strainer
Drip pan
Copper Gauze
To Bilge Pump
Drip pan support timber

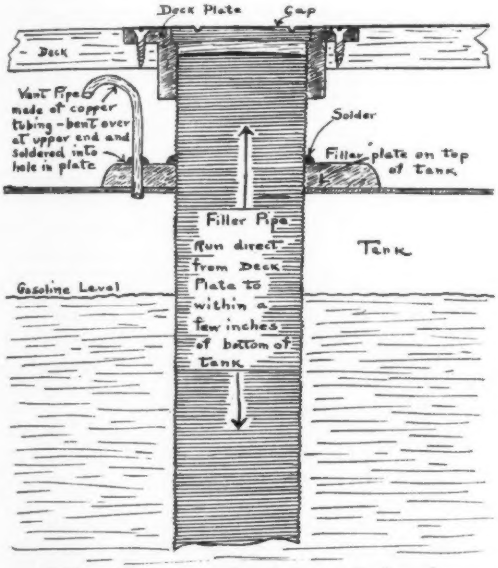
An arrangement for a shaped tank in the bow

Each tank has its individual fittings directly under that tank and over its drip pan, consisting of union, globe valve, strainer and check valve. These check valves are installed so that gasoline cannot run from one tank to the other, placing the checks so that the fuel can run from the tank but not back to it. Placing an individual strainer under and close up to each tank is the best, as it will prevent the fuel line from clogging, and it can be drained into the drip pan. The feed lines from each tank join the main fuel line, leading to the carbureter, through a Tee fitting. This main line should not have any pipe fittings in it until it reaches the union, next to the globe-valve at the carbureter, which fittings are over the drip pan at this point. The drip pans are made up of galvanized iron, shaped to extend completely under the tanks and fittings. A copper gauze screening is soldered into each drip pan. Extend the front and back of these pans as high as possible, but not sufficient to interfere with the accessibility of the pipe fittings under the tanks. Leave a lip or extension at the top edges of the front:

and back sections of these pans, by which they can be screw fastened to the timbers, thus supporting them in place. Each pan has a small flange soldered to the bottom of its lowest point and the drain pipe, which should be of brass or copper, is screwed into and soldered to this flange. These drain pipes run on down to unions, then a Tee fitting and so on through a three-way valve to the bilge pump suction pipe, providing an easy and safe way to drain the drip pans at frequent intervals. By using a three-way valve in this line, you use the total suction of the bilge pump to empty the drip pans, without any possibility of gasoline getting into the bilge through the bilge pump suction pipe.

All pipe fittings in this installation are made up with shellac on threads, then well soldered after screwed up tight. Of course, solder is not used on the split of unions, the packing glands on valves and the drain traps on strainers.

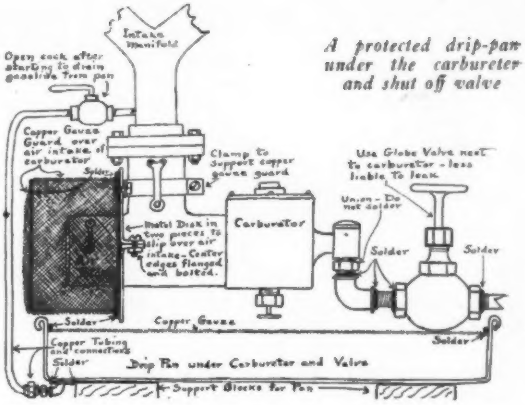
It is impossible for gasoline to get into the bilge from this system.


Deck Plate
Cap
Deck
Vent Pipe made of copper tubing - bent over at upper end and soldered into hole in plate
Solder
Filler plate on top of tank
Filler Pipe
Run direct from Deck Plate to within a few inches of bottom of tank
Tank
Gasoline Level

Piping details for under deck installation of a bow tank

SINGLE TANK UNDER FORWARD DECK

The illustrations showing this installation are very clear, showing the framing, pan, flange on top of tank and drip pan details. Two kinds of deck plate installations are pictured. The one using the deck-plate-stuffing-box is preferable, as vibration is absorbed without transmitting it to the tank, where strains might cause leaks. The vent tube is soldered into the inlet tank flange and is carried up as close as possible to the under side of the deck, the end of the tube being bent over. The filling pipe is run well down inside the tank to prevent sloshing of fuel out around deck plate, etc. The sides of the tank are carried up three or four inches past the top of the tank, forming a sort of pan, and a small copper drain pipe is soldered into one corner of this pan on top of tank and leads down to the drip pan underneath. This tank should be well braced, on account of the excessive strain placed upon it when the boat is bobbing around in a sea. These supporting timbers are placed in such a location that they do not interfere with the drip pan and pipe fittings.


Intake Manifold
Open cock after starting to drain gasoline from pan
Copper Gauze Guard over air intake of carburetor
Solder
Clamp to support copper gauze guard
Use Globe Valve next to carburetor - less liable to leak
Union - Do not solder
Metal Disk in two pieces to slip over air intake - Center edges flanged and bolted.
Carburetor
Solder
Solder
Solder
Copper Gauze
Solder
Copper Tubing and connections
Solder
Drip Pan under Carburetor and Valve
Support Blocks for Pan

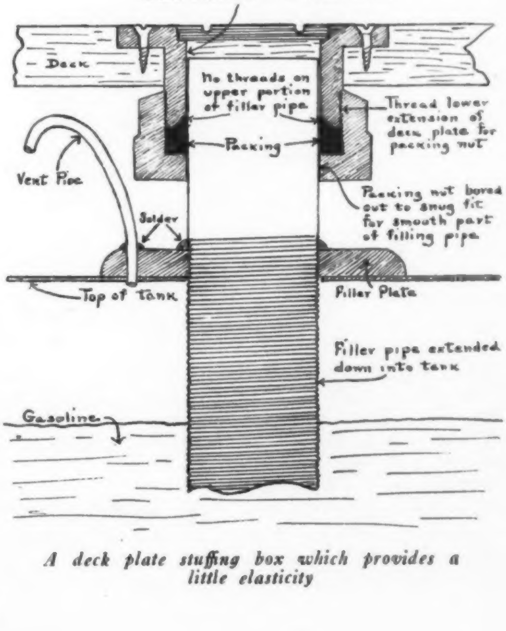
A protected drip-pan under the carbureter and shut off valve

The drip pan is made as large as possible, in order that it can safeguard the entire bottom of the tank and pipe fittings. A copper-gauze screen is soldered inside the drip pan. The drain pipe, which is screwed into soldered flange on bottom of drip pan, and then soldered to flange, leads on back to bilge pump or is fitted with drain cock at end. The union, strainer and globe valve is over the drip pan, these fittings being made up tight with shellac and soldered.

This is another safe and practical installation.

DOUBLE TANKS ABOVE DECK

Double tanks above deck are invariably in the cockpit and under side lockers are under twin seats in front part of bridge deck. Either location is easily accessible to the scuppers for drainage purposes. The tanks should be installed under lockers or seats which have been built on top of cockpit or bridge decks, so that even though no special pan arrangements are provided, any fuel leakage or overflow would drain overboard via the scuppers. While such an arrangement may seem suitable, it is dangerous, as the deck will absorb some of the gasoline and allow it to seep through to the bilge, particularly around (*Continued on page* 500)


Deck Plate with smooth bore
Deck
No threads on upper portion of filler pipe
Thread lower extension of deck plate for packing nut
Packing
Vent Pipe
Packing nut bored out to snug fit for smooth part of filling pipe
Solder
Top of tank
Filler Plate
Filler pipe extended down into tank
Gasoline

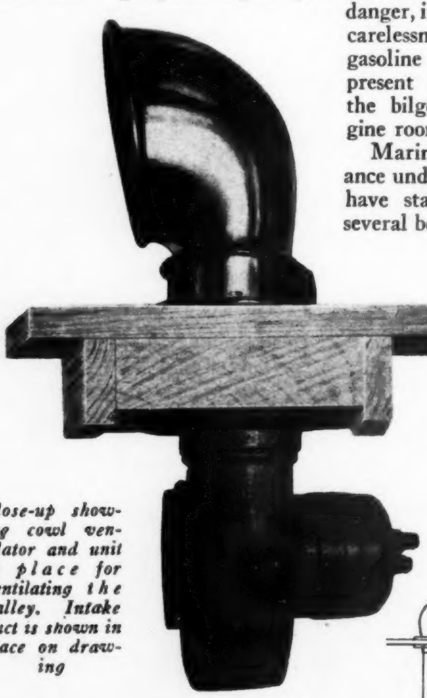
A deck plate stuffing box which provides a little elasticity

VENTILATION FOR MODERN BOATS

A Neat Electric Driven Ventilating Blower Designed for Use on Boats of Any Size to Remove Heat and Vapors From Interiors

By W. E. WILLIS

ONE of the major problems to be solved by builders as well as owners of motor boats is how to secure sufficient ventilation for the bilge, engine room or galley. Present day demand for streamline construction has compelled boat builders to cut down engine room space to the point where the engine literally fills the room. And the high-speed engines of today give rise to a further problem because of the faster speeds and higher temperatures at which they operate. This combination of crowded engine room and high-speed engine produces a source of danger, if through carelessness, any gasoline vapor is present in either the bilge or engine room.



Close-up showing cowl ventilator and unit in place for ventilating the galley. Intake duct is shown in place on drawing

Marine insurance underwriters have stated that several boats were lost during the past season on account of extreme carelessness. Gasoline vapor, which had been allowed to escape into a poorly ventilated engine room while the gas tanks were being refilled or which had been formed because of a leak from the carbureter or gas line, was ignited by a spark from the starting motor or other cause. That accidents from this source can be eliminated through a correctly designed ventilating system is the opinion alike of the Fire Underwriters and naval architects.

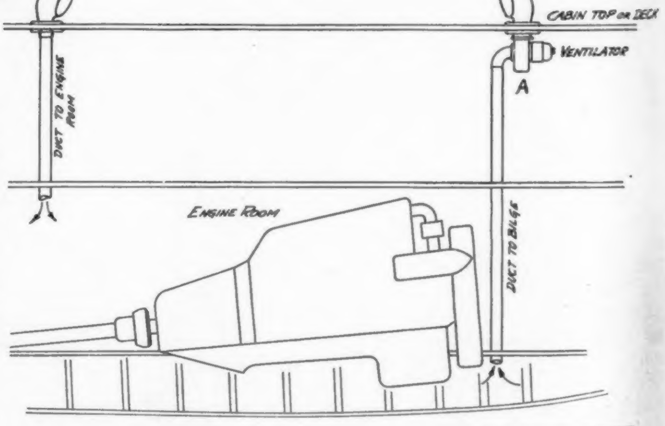
Toward this end the ventilating system shown in the accompanying illustrations has recently been perfected and will be demonstrated for the first time at the Silver Anniversary National Motor Boat Show. Recent tests have shown this new type ventilator in the 3-inch size to evacuate 100 cubic feet of air a minute.

Briefly, the ventilating system consists of a spark-proof, fully enclosed electric motor designed to operate on 6, 12 or 32 volts, to drive an impellor which is contained in a cast housing having an outlet and either a three-inch or four-inch inlet. When mounted in combination with a cowl ventilator on deck and ducts of the required length, the ventilating unit requires a very small amount of current in operation and will lift a large volume of air, which, when circulating through the system, will positively remove all vapor from the bilge and engine-room. The sketch shows a method of installing the ventilating unit and air ducts to provide a complete circulation of air in the bilge.

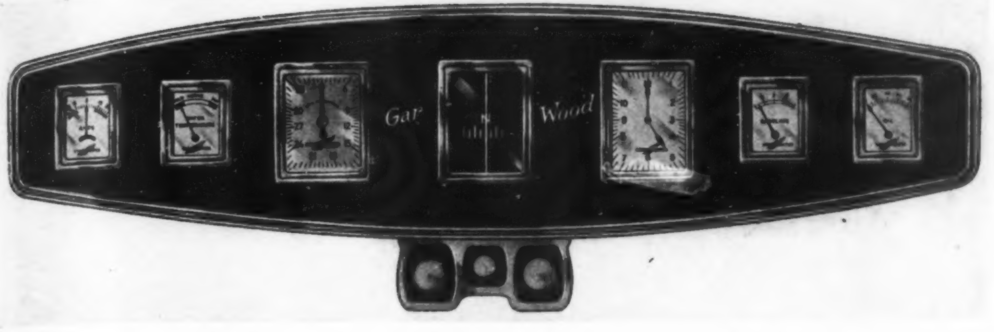
Furthermore, when mounted in the cabin top over the galley, it will provide complete ventilation and a cool atmosphere in this usually overheated and crowded section of the boat.

In accordance with the suggestion of the marine underwriters and the Technical Board of the National Association of Engine and Boat Manufacturers, the ventilator has been built in two sizes; the one has a three-inch inlet with a capacity of 100 cubic feet of air per minute and is suitable for craft 38 feet and smaller. The larger size ventilator has an inlet four inches in diameter and is designed for use on boats over 38 feet. The larger model is undergoing tests in the Yale University Laboratory at the present time to determine its exact capacity.

In order to make certain that the engine room and bilge shall be entirely free from gasoline vapor at the time of starting the engine, the ventilator should be run a few minutes before the starting motor of the engine is allowed to function.



A popular method of installing the ventilating unit and air ducts to provide for complete circulaton of air in bilge and engine room



A seven instrument panel by Consolidated designed for the new Gar Wood runabouts

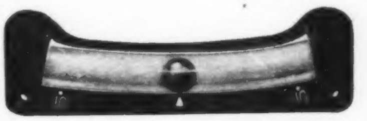
NEWEST INSTRUMENT PANELS

Panel Boards of Fine Runabouts Now Supplied With Artistic Weatherproofed Instrument Groups

FOR many years the Consolidated Instrument Company of America have been manufacturing precision recording instruments for marine, aeronautical, meteorological and industrial uses. Consolidated instruments are now used as standard equipment on a large portion of the country's aircraft as well as on a great many standardized and custom-built pleasure boats.

Laboratories of Consolidated are continually testing new precision instruments, which, if they successfully meet the required standards of efficiency, are put into actual use aboard experimental craft where they are given the severest kind of treatment over a long period of time. Upon successfully completing these actual tests, Consolidated instruments are released to the public as the latest developments of their kind obtainable and as instruments which are scientifically and mechanically perfect in every detail of design and construction.

For the 1930 season Consolidated are introducing to the boating public a complete line of distinctive multiple-instrument panel creations, containing from two to seven instruments per panel, and in various designs and finishes to suit the individual requirements of bulk purchasers. These new panel creations have bezels of a nonferrous metal finished in either chrome or enamel as desired, together with a selection of mat colors such as French gray, standard gray, walnut, black and silver. Each instrument in a panel has an individual bezel to match the large frame bezel employed and each instrument has a separate glass cover. Each panel is indirectly flood lighted. Instrument calibrations or graduations are exceptionally distinct and easily read.



CONSOLIDATED

FUEL PRESSURE
CONSOLIDATED

OIL PRESSURE
CONSOLIDATED

TEMP
CONSOLIDATED

The Inclinometer to determine the list to port or starboard

A single unit ammeter to keep check on generator and battery

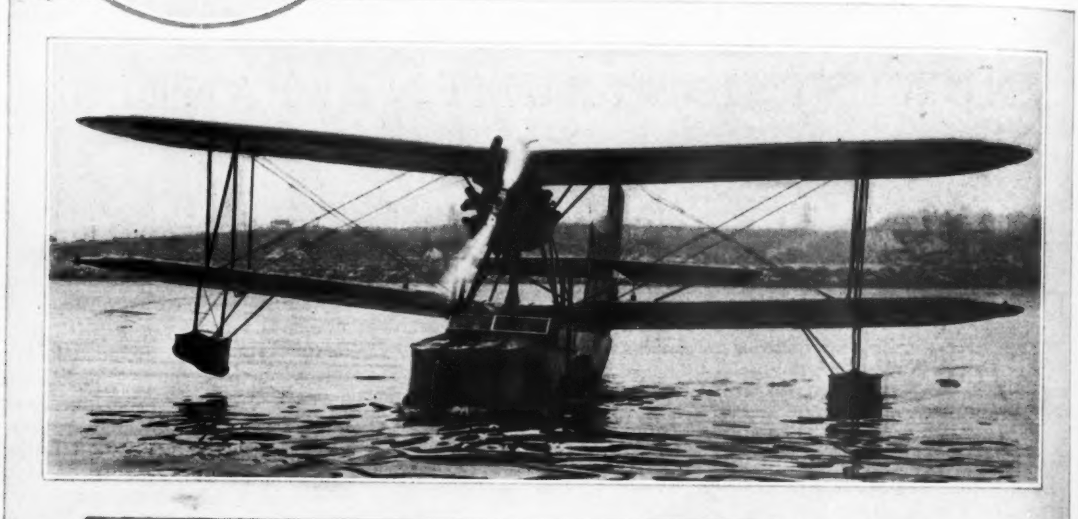
Oil gauge of the high pressure type with easy reading graduations

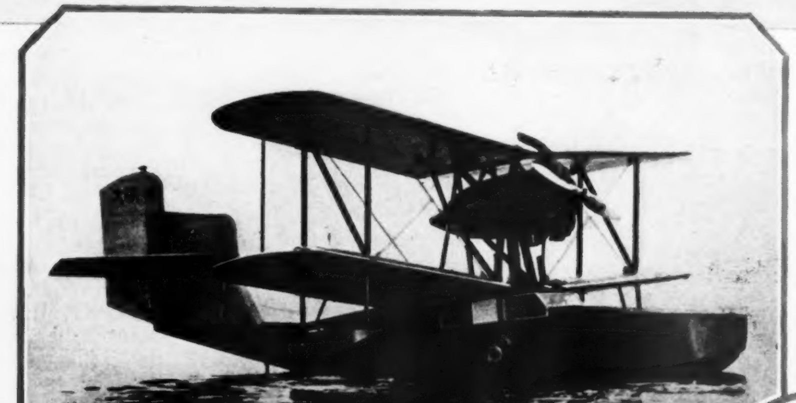
An air pressure gauge for full tank installation under pressure

A distance reading thermometer to keep track of the cooling jacket temperatures

MOTOR BOATS THAT FLY

Sturdy Amphibian Flying Boats Equally at Home Ashore, Afloat or Awing. The Commuting Craft of the Age With a Cruising Range of 450 Miles



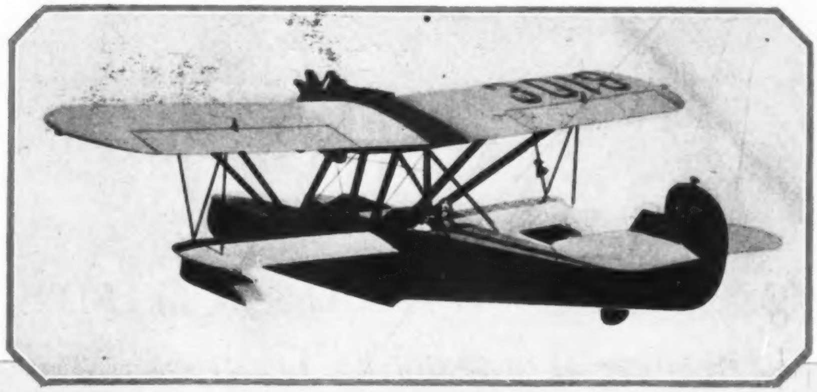


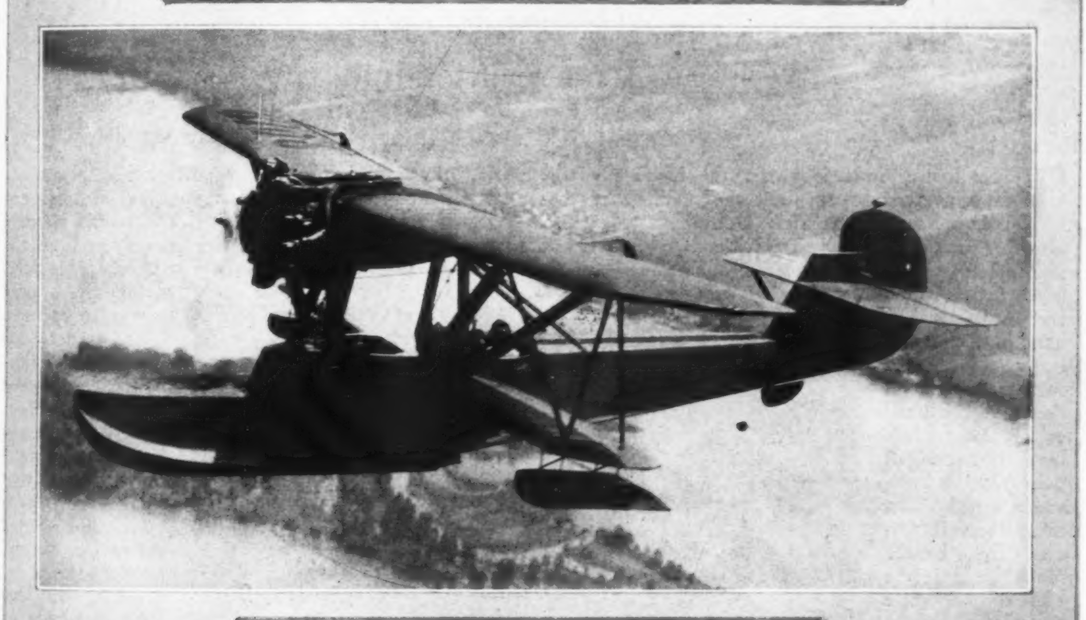
The Keystone-Loening Amphibian commuter is a four passenger sport machine designed for private use. Ideal for commuting from city to country in shortest possible time. It is driven by a J6 Wright Whirlwind radial motor of 300 h.p. mounted over the cabin and between the wings

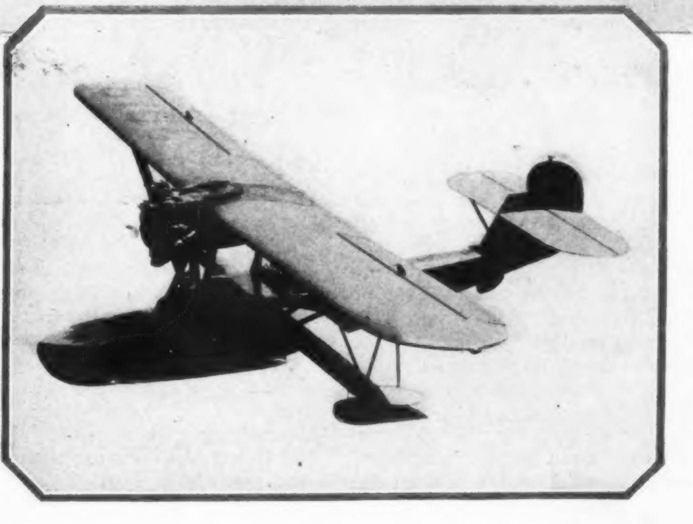
In the Keystone-Loening Amphibian the wheels shown at the side of the hull can be raised or lowered in a matter of five seconds so that the boat can land with equal facility on the water or the flying field. The cruising speed of these ships is 90 miles and the top speed 115. The hull is ruggedly built, streamlined and seaworthy. It forms the backbone of the plane and houses the cabin. The framework and shell are of duralumin which combines lightness and strength. Watertight bulkheads are provided bow and stern and a padded buffer protects the nose

AN EASY SHIP TO FLY

The Art of the Boatbuilder Embodied in the Eastman Flying Boat Which Takes a Prominent Place in the Seagoing Family







A boat that floats and flies will soon be an adjunct to every large yacht and motor boat. The modern sports loving American is rapidly becoming aware of the advantages of the speedy transportation made possible with a flying boat. Ample power and sound construction provide safety

The Eastman Flying Boat powered with a Curtis Challenger Radial engine of 180 h.p. yields a cruising speed of ninety miles. Thick aluminum plating with five water-tight compartments insures a sound metal boat. Operation is simple and landing or taking off is quickly accomplished since a submerged rudder gives easy control

A gang of natives trimming mahogany logs in Africa

EXOTIC HARD WOODS

Remote Corners of the Globe Called on to Supply Rare Woods for Fine Yacht and Cabinet Work

By E. B. JOHNSON

Ichabod T. Williams & Sons

THE hunter in going after the mahogany tree must overcome many obstacles and hazards bebefore his prize is safely brought to tidewater. Growing in the same climate with this Monarch of the Forest we find many other trees of beautiful exotic hardwoods which are just as hard to obtain as the mahogany log. In fact, sometimes they give the hunter a greater problem because of their size and extreme weight. In these tropical forests the hunter must overcome the rapids of the streams, cut down the dense foliage in the jungle to make a path from the river to the tree and the terrain adds extremely to the difficulties in securing these precious woods. Many times after all of these difficulties have been overcome and the logs are resting along the banks of these various rivers waiting for the rainy season, insects and worms are know to have ruined hundreds of logs on account of the delay of the rainy season; but here the difficulties do not cease. Many more hardships must be overcome before the log is finally placed on the ships to be transported to the American market. Most of the exotic woods are found in a region classified by plant geographers as a tropical rain forest. The characteristics of this climatic formation, the tropical rain forest, are—first, mean average temperature of 77 degress—second, an annual rainfall of from eight to two hundred inches. Transportation in these tropical climates is vastly different than in our northern civilized countries. In many of the forests animals cannot be used on account of the tsetse fly and it is too expensive to even attempt to use tractors. Therefore, man is the only power to be used. The reader can imagine the difficulties encountered in bringing one of these extremely large logs weighing ten to fifteen tons over mountains and across valleys for several hundred miles, by dragging the logs with hundreds of black boys hauling the log, and then floating it 800 to 1,000 miles to seashore.

The laborious hand methods used to haul heavy logs many miles to the rivers

Of all the exotic cabinet woods that come to market by far the most important and most used is mahogany. This wood comes from Africa, the West Indian Islands, Central America, Mexico and parts of South America.

A buyer should acquaint himself with the properties and characteristics of the mahogany coming from these different countries and decide which is the most suitable for his particular purpose, as each wood has a special merit for certain kinds of work. It is very important for the buyer after deciding on the variety, for him to see that the right finish is applied to the wood. A transparent stain should be used, the color should not be too dark—for mahogany when properly finished improves with age and its

(*Continued on page 476*)

The Navy Pier at Chicago, location of a permanent boat and engine exhibition

CHICAGO'S MOTOR BOAT MART

The Great Navy Pier Transformed into a Permanent Boat and Engine Exhibit Which Will Attract Visitors from All Parts of the Neighboring States

PICTURE in your fancy an exhibition structure seventy feet wide and two-fifths of a mile long, flooded with God's daylight, on the upper deck of a magnificent concrete and steel pier which extends for more than half a mile straight out over the blue waters of Lake Michigan. Such is Chicago's new Motor Boat Mart.

Imagine this structure filled with every type of craft devised by the greatest naval architects and manufacturers for the delectation of man and womankind—stately cruisers, sneaky highspeed runabouts, easy-going family boats, snappy outboard hulls of every type, small sailers, canoes and what-not, and all of the engines and accessories that go with them. It is a picture that holds a thrill for redblooded people.

It was a dream picture—now it is a fact—and the fact is greater than the dream which preceded it. The lease is secure, and the exhibits are moving in. The hearty response of the manufacturers and the sanction of the National Association of Engine & Boat Manufacturers assures the success of the venture.

Chicago's magnificent Navy Pier, often spoken of as one of the world's wonders, makes possible the ideal location of the Mart. On the shore side is the skyscraper heart of Chicago. Beside the pier to the south is the entrance to its water transportation artery, the Chicago River, and to the government harbor. Close at hand are Chicago's

(Continued on page —)

Interior of the upper deck showing the ample space devoted to the boat exhibits

AMERICA'S LEADING MARINE ENGINES

Newest Sizes and Styles of Marine Engines Arranged Alphabetically for Easy Selection and Comparison

MAKE & MODEL	Horse Power	Bore & Stroke	No. of Cyl	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark Plugs	Carbu-retor
BRENNAN STANDARD **Syracuse, N. Y.**											
N-4	15–40	4 x 5	4	1200	625	Pr	Own	....	B & M	Ch	Str
N-4	25–50	4 x 5	4	2000	600	Pr	Own	....	B & M	Ch	Str
E-4	25–60	4½ x 5	4	1500	1000	Pr	Own	....	B & M	Ch	Str
D-6	50–75	4½ x 5	6	1800	1100	Pr	Own	....	B & M	Ch	Str
60	60–75	4 x 5½	6	2000	900	Pr	Own	....	Opt	Ch	Str
100	65–100	4⅜ x 5½	6	1800	1200	Pr	Own	....	Opt	Ch	Str
Master Six	200	5 x 6½	6	2800	1700	Pr	Own	....	Opt	Ch	Str
Gold Cup	150	4½ x 6½	6	2800	1500	Pr	Own	....	Opt	Ch	Str
EE-4	50–70	4½ x 5	4	2000	650	Pr	Own	....	Opt	Ch	Str
90 De Luxe	60–115	4 x 5½	6	2500	H.S. 900 H.D. 1200	Pr	Own	....	Opt	AC	Str
125 De Luxe	65–125	4⅜ x 5½	6	2200	H.S. 1000 H.D. 1500	Pr	Own	....	Opt	AC	Str
BUDA **Harvey, Ill.**											
HM-298	75	3¾ x 4½	6	....	....	Pr	Par	El	B & M	....	Sch
BMA-6	85	4⅛ x 5⅛	6	....	....	Pr	Par	El	B & M	....	Sch
GMF-6	130	4¾ x 6	6	....	....	Pr	Par	El	B & M	....	Sch
GMFR-6 Red. Gear	130	4¾ x 6	6	....	....	Pr	Par	El	B & M	....	Sch
BUFFALO **Buffalo, N. Y.**											
Navy	14–30	3½ x 5	4	600–1200	690	Cir Spl	Joes	LN	DR or Au	Ch	Zen
Dreadnaught	120	5⅞ x 7	4	1200	2800	Pr	Joes	LN	DR or Au	Ch	Str
Dreadnaught	200	5⅞ x 7	6	1500	3200	Pr	Joes	LN	DR or Au	Ch	Str
Dreadnaught	240	5⅞ x 7	8	1200	4000	Pr	Joes	LN	DR or Au	Ch	Str
Dreadnaught—Red. Gear	200	5⅞ x 7	6	1500	3500	Pr	Joes–Morse Red. Gear	LN	DR or Au	Ch	Str
CE	50–80	6¾ x 9	4	500–800	3200	Pr	Joes	LN	DR or Au	Ch	Str
CHRIS-CRAFT **Algonac, Mich.**											
225	225	5 x 5¼	8	2200	1500	Pr	Own	Delco	Delco	Ch	Sch or Ho
CHRYSLER **Detroit, Mich.**											
A and C Imperial	125	3⅝ x 5	6	2800	940	Pr	Own	DR	DR	....	Hol
AM Imperial	40–65	3⅝ x 5	6	2800	1000	Pr	Own	DR	DR	....	Sch
AMR Imperial—Red. Gear	125	3⅝ x 5	6	1400	1125	Pr	Own	DR	DR	....	Hol
A and C Royal	82	3¼ x 5	6	2800	765	Pr	Own	DR	DR	....	Sch
AM Royal	30–50	3¼ x 5	6	1600	890	Pr	Own	DR	DR	....	Sch
AMR Royal—Red. Gear	30–50	3¼ x 5	6	800	890	Pr	Own	DR	DR	....	Sch
Crown	75	3⅛ x 4⅛	6	3300	625	Pr	Own	DR	DR	....	Hol
DETROIT MARINE **Detroit, Mich.**											
F-6A	300	6 3 x 7.1	6	1750	1750	Pr	Joes	Gar Wood	DR	Ch	Zen
ELCO **Bayonne, N. J.**											
F4	85	5 x 6	4	1350	1400	Pr	Own	LN	LN & R.Bo	AC	Zen
F-62	125	5 x 6	6	1350	1850	Pr	Own	LN	LN & R.Bo	AC	Zen
FAY & BOWEN **Philadelphia, Pa.**											
LN-403 Gobest	20	3 x 4	4	1800	365	Pr	Par	Au	B or M	Ch	Sch
LC-61	55	3½ x 4½	6	2000	845	Pr	Par	NE	B	Ch	Sch
LN-43	40	4¾ x 5½	4	1000	950	Pr	Par	NE	B & M	Ch	Sch
LNS-43	60	4¾ x 5½	4	1400	750	Pr	Par	NE	M	Ch	Sch
Challenger	60	3⅜ x 4	6	2800	690	Pr	Joes	Au	B	Ch	Sch
Conqueror	100	4½ x 4¾	6	2200	1150	Pr	Par	Au	B	Ch	Sch
Faybow-Continental L	40	2⅞ x 4¾	6	2200	650	Pr	Par	Au	B	Ch	Sch
Faybow-Continental B	70	3¾ x 5	6	2200	1075	Pr	Par	Au	B	Ch	Sch
Faybow Continental T	80	4⅛ x 5¼	6	2000	1445	Pr	Par	Au	....	Ch	Sch
GRAY **Detroit, Mich.**											
One-5	5	3¾ x 4½	1	1200	165	Spl	Par	None	Wi	AC	Til
Two-10	10	3¾ x 4½	2	1200	248	Spl	Par	None	Bo	AC	Til
1227	30	3⅜ x 4¼	4	1800	300	Pr	None	Au	Au & Bo	AC	Til
37	37	3⅜ x 4¼	4	2900	290	Pr	None	Au	Au	AC	Til
25	25	3⅛ x 4¼	4	1800	500	Pr	Par	Au	Au	AC	Til
Four-30	30	3⅜ x 4¼	4	2400	490	Pr	Par	Au	Au & Bo	AC	Til
Four-41	41	3⅜ x 4¼	4	3000	390	Pr	Par	Au	Au	AC	Til
Four-44	45	3⅞ x 4¼	4	2600	550	Pr	Par	Au	Au	AC	Til
Four-50	50	4¼ x 4¼	4	2400	650	Pr	Par	Au	Au	AC	Til
Four-60	55	4¼ x 5	4	1800	850	Pr	Joes	Au	Au & Bo	AC	Sch
Six-50	45	3⅜ x 3⅞	6	2800	540	Pr	Par	Au	Au & Bo	AC	Til
Six-70	72	3⅜ x 4	6	3000	570	Pr	Par	Au	Au	AC	Til
Six-75	77	3⅜ x 4⅝	6	3000	640	Pr	Par	Au	Au	AC	Til
Six-90	100	3⅞ x 4½	6	2800	900	Pr	Joes	Au	Au	AC	Til
Eight	125–140	3⅜ x 4½	8	3000	830	Pr	Joes	Au	Au	AC	John-Hol-Ze
HALLETT **Los Angeles, Cal.**											
R4S	8	2⅞ x 2¾	4	2500	220	Spl	Joes	Au	Au	Sd	Zen
R4	8	2⅞ x 2¾	4	2500	205	Spl	Joes	....	Bo M	Sd	Zen
HALL-SCOTT **New York, N. Y.**											
H. S. R. 4—Red. Gear	70	4¼ x 5½	4	900	1750	Pr	Own	DR	DR	Ch	Zen
H. S. R. 4—Red. Gear	70	4¼ x 5½	4	600	1750	Pr	Own	DR	DR	Ch	Zen
H. S. R. 6—Red. Gear	100	4¼ x 5½	6	900	2130	Pr	Own	DR	DR	Ch	Zen
H. S. R. 6—Red. Gear	100	4¼ x 5½	6	600	2130	Pr	Own	DR	DR	Ch	Zen
H. S. M. 6	100	4¼ x 5½	6	1800	1640	Pr	Par	DR	DR	Ch	Zen
H. D.-6	175	5 x 7	6	1800	2600	Pr	Own	LN	DR	Ch	Zen
H. D.-6	175	5 x 7	6	900	2820	Pr	Own	LN	DR	Ch	Zen
H. D.-6	175	5 x 7	6	600	2820	Pr	Own	LN	DR	Ch	Zen
L. M. 6-F	200	5 x 7	6	1800	1500	Pr	Joes	LN	DR	Ch	Zen
L. M. 6-G	200	5 x 7	6	1800	1650	Pr	Own	LN	DR	Ch	Zen

(Continued on page 224)

See page 254 for Key to Equipment Symbols

LEADING DIESEL ENGINES

MODEL	Horse Power	Bore and Stroke	No. of Cyls.	R.P.M.	Weight	*Lubrication Method	*Reverse Gear	*Starting Device
BUDA-M. A. N. Harvey, Ill.								
DM-6-30	180	6½ x 8¾	6	1000		Pr		El
COOPER-BESSEMER Grove City, Pa.								
EP-6	200	7½ x 10½	6	670	10400			Air
EP-8	275	7½ x 10½	8	670	12400			Air
FP-4	135	9 x 12	4	400	11000			Air
FP-6	300	9 x 12	6	600	15000			Air
FP-8	400	9 x 12	8	600	18800			Air
G-6	230	9½ x 14	6	300	29900			Air
JR-6	400	11 x 14	6	475	35500			Air
JR-8	550	11 x 14	8	475	42500			Air
KR-6	675	14 x 18	6	375	74000			Air
KR-8	900	14 x 18	8	375	84500			Air
LR-6	800	16 x 20	6	300	99000			Air
LR-8	1060	16 x 20	8	300	125000			Air
MR-6	1125	18 x 22	6	300	120000			Air
MR-8	1500	18 x 22	8	300	160000			Air
CUMMINS Columbus, Ind.								
U	10	4½ x 6	2	1000	1650	Pr	Joes	El
U	30	4½ x 6	3	1000	2075	Pr	Joes	El
U	40	4½ x 6	4	1000	2350	Pr	Joes	El
U	60	4½ x 6	6	1000	2900	Pr	Joes	El
F	12½	5½ x 7½	1	600	1850	Pr	Joes	Air
F	25	5½ x 7½	2	600	2550	Pr	Joes	Air
F	37½	5½ x 7½	3	600	3325	Pr	Joes	Air
P	55	5½ x 7½	4	700	3900	Pr	Joes	Air
K	100	6¾ x 9	4	700	6600	Pr	Joes	El or Air
K	170	6¾ x 9	6	800	8280	Pr	Joes	El or Air
FULTON St. Louis, Mo.								
L	100	8½x11	3-4	600	11100	Pr	Joes	Air
L	132	8½x11	4	600	13000	Pr.	Joes	Air
L	166	8½x11	5	600	14980	Pr.	Joes	Air
L	200	8½x11	6	600	15800	Pr.	Joes-Rev	Air
L	265	8½x11	8	600	18540	Pr.	Rev.	Air
RR	195	13½x18	3	300	35000	Pr.	Joes	Air
RR	260	13½x18	4	300	42000	Pr.	Joes	Air
RR	325	13½x18	5	300	49000	Pr.	Joes	
RR	390	13½x18	6	300	55000	Pr.	Rev	
RR	520	13½x18	8	300	65000	Pr.	Rev	
HILL-DIESEL Lansing, Mich.								
PBM	12½	5 x 7	1	1000	1600	Pr	Joes	Hand or El
PBM	25	5 x 7	2	1000	2000	Pr	Joes	Hand or El
PBM	37½	5 x 7	3	1000	2400	Pr	Joes	Air or El
PBM	50	5 x 7	4	1000	2800	Pr	Joes	Air or El
PBM	75	5 x 7	6	1000	4000	Pr	Joes	Air or El
PAM	80	6 x 10	4	800	5400	Pr	Joes	Air
PAM	120	6 x 10	6	800	7400	Pr	Joes	Air
MAYBACH-ZEPPELIN New York, N. Y								
G4A	150	5½ x 7⅛	6	1300	2650	Pr	Own	Air
G4B	150	5½ x 7⅛	6	1300	2250	Pr	Own	Air
NELSECO Groton, Conn.								
MI-15	250	10½ x 15	6	350	26400	Pr	Rev	Air
MI-18	350	12½ x 18	6	280	40200	Pr	Rev	Air
MI-22	550	15 x 22	6	250	77000	Pr	Rev	Air
MI-53	1000	20⅞ x 20⅞	6	250	154000	Pr	Rev	Air
GV-54	600	16½ x 24	6	205	120000	Pr	Rev	Air
SPEEDWAY New York, N. Y.								
D	300	8½ x 11	6	700	7600	Pr	Rev	Air
STANDARD Jersey City, N. J.								
AE-4	60	6 x 8	4	650	3800	Pr	Rev Gear	El or Air
AE-6	90	6 x 8	6	650	5000	Pr	Direct Rev & Gear	Air
AI-3	75	8½ x 12	3	350	9000	Pr	Direct Rev	Air
AI-4	100	8½ x 12	4	350	10500	Pr	Direct Rev	Air
AI-6	150	8½ x 12	6	350	13500	Pr	Direct Rev	Air
AN-6	290	10 x 14	6	300	20000	Pr	Direct Rev	Air
AQ	330	12 x 17	6	300	38000	Pr	Direct Rev	Air
OQ	330	12 x 17	6	275	56000	Pr	Direct Rev	Air
13½OQ	400	13½ x 17	6	275	60000	Pr	Direct Rev	Air
TREIBER Camden, N. J.								
CR-4	65	5 x 7	4	1200	1800	Pr	Plan. Mult. Disc	El
DR-4	100	6 x 8	4	1000	2300	Pr	Plan. Mult. Disc	El
CR-6	100	5 x 8	6	1200	2200	Pr	Plan. Mult. Disc	El
DR-6	150	6 x 8	6	1000	2800	Pr	Plan. Mult. Disc	El
DR-12	300	6 x 8	12-V	1000	3800	Pr	Plan. Mult. Disc	El
ER-4	150	7½ x 9½	4	900	4500	Pr	Plan. Mult. Disc	El
ER-6	225	7½ x 9½	6	900	5500	Pr	Plan. Mult. Disc	El

*KEY TO SYMBOLS

El.—Electric
Pr.—Pressure
Rev.—Weversible

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STANDARDIZED CRUISERS AND EXPRESS CRUISERS

PRICES—SIZES—EQUIPMENT

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
A. C. F.												
New York, N. Y.												
30 Cruiser Runabout	6500	30-6	8-8	2-4	4-0	2-10	6-3	Round	Gray	100	22	abcdefghijklmnopqstuvwxyzBCDEFGHIJK LMNOPQRTUVWXYZ
30 Cruiser	4950	30-0	9-6	2-5½	4-11	3-6	6-2	Round	Gray	40	11	abcdefghijklmnopqstuvwxyzBCDEFGHIJK LMNOPQRTUVWXYZ
38 Sport Cruiser	11500	38-0	9-0	2-6	4-1	2-10	6-4	Round	Gray	2-100	26	abcdefghijklmnopqstuvwyzBCDEFGHIJK LMNOPQRTUVWXYZ
40 Cruiser	11800	40-0	11-4	3-2	5-3	2-11	6-4	Round	Hall Scott	100	14	abcdefghijklmnopqstuvwxyzBCDEFGHIJK LMNOPQRSTUVWXYZ
46 Cruiser	......	46-0	11-6	3-3	5-4	4-0	6-3	Round	Gray	2-90	18	abcdefghijklmnopqstuvwxyzABCDEFGHI KLMNOPQRSTUVWXYZ
47 Cruiser	21000	47-0	11-9	3-3	6-0	4-0	6-3	Round	Hall Scott	100	13	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
54 Twin Screw Motor Yacht	32500	54-0	12-0	3-6	6-0	4-2	6-4	Round	Hall Scott	2-100	15	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
54 Twin Screw Motor Yacht	36500	54-0	12-0	3-6	6-0	4-2	6-4	Round	Hall Scott	2-175	19	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
68 Twin Screw Motor Yacht	60000	68-0	14-0	3-6	7-4	4-9	6-4	Round	Hall Scott	2-175	18	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
BANFIELD												
Atlantic Highlands, N. J.												
32 Standard—Single Cabin	7250	32-0	8-6	2-6	5-5	3-4	6-0	Skiff	Optional	200	30	abcdefgpqtuvwyzFGHJKLMQSVWXY
32 Standard—Double Cabin	6750	32-0	8-6	2-6	5-5	3-4	6-0	Skiff	Optional	130	22	abcdefgpqtuvwyzFGHJKLMQSVWXY
32 De Luxe—Single Cabin	7950	32-0	8-6	2-6	5-5	3-4	6-0	Skiff	Optional	200	30	abcdefgpqstuvwxyzABFGHIJKLMQSVW XYZ
32 De Luxe—Double Cabin	7450	32-0	8-6	2-6	5-5	3-4	6-0	Skiff	Optional	130	22	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
BLANCHARD												
Seattle, Wash.												
26	2500	26-0	6-7	1-8	......	......	......	Round	Red Wing	50	14	abcdefghpsuvwyzFGIJKLMUVXY
32	4000	32-0	8-6	2-4	......	......	......	Round	......	......	12	abcdefghpqsuvwyzBFGHIJKLMQRSUVW XY
36	5750	36-0	9-0	2-6	......	......	......	Round	Red Wing	40-80	13	abcdefghpqsuvwyzBCFGHIJKLMQRSTU VWXY
45	1500	45-0	10-6	2-10	......	......	......	Round	Kermath	150	13	abcdefghpqsuvwxyzABCEFGHIJKLMQRS TUVWXYZ
BROOKS												
Saginaw West Side, Mich.												
291	529	26-0	8-5	2-4	4-2	3-0	5-0	Vee	Gray	50	12	
292	633	30-0	8-8	2-10	5-1	3-2	5-6	Vee	Universal	75	13	
293	792	36-8	9-10	2-10¼	5-5	3-6	5-8	Vee	Gray	110	14½	
293	867	40-0	9-10	2-10¼	5-5	3-6	5-8	Vee	Gray	110	14½	
242	452	30-0	7-6	2-0	4-10	2-3	5-4	Round	Gray	50	13	
CHRIS-CRAFT												
Algonac, Michigan												
121 Custom Commuter	......	34-0	8-3	2-2	2-6½	1-10½	5-2	Vee	2 Scripps or 2 Kermath	2-200	40	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMQRSUVWXYZ
122 Commuting Cruiser	......	38-0	9-8	2-6	4-1½	2-10	6-3	Vee	Chris-Craft	225	30	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMQRSUVWXYZ
123 Chris-Craft Yacht	......	48-0	11-6	2-8	3-4	2-2½	6-4	Vee	2 Chris-Craft	2-225	30	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMQRSTUVWXYZ
CONSOLIDATED												
Morris Heights, N. Y. City												
55 Cruiser	......	55-0	11-6	3-3	......	......	6-2	Round	Speedway	2-170	20	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOPQRSTUVWXYZ
CORSAIR												
Detroit, Mich.												
Crusader 30	6500	30-0	9-3	2-5	4-7	3-1	6-0	Round	Chrysler	120	18	abcdefghpqstuvwyzBEFGHIJKLMQRSUV WXYZ
Crusader 36	11000	36-0	9-10	2-8	5-5	3-4	6-2½	Round	Scripps	200	24	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMQRSUVWXYZ
Crusader De Luxe 36	......	36-0	9-10	2-8	3-5	3-4	6-2½	Round	Scripps	200	24	abcdefghijklmnopqstuvwxyzABCDEFGHI KLMNOQRSUVWXYZ
DAUNTLESS												
New York, N. Y.	......	42-0	10-5	3-0	......	......	6-3	Round	Lathrop	100	13¼	bcdefghijklmnopqstuvwxyzBCEFGHIJKL MNOQRSTUVWXYZ
DAWN												
Clason Point, N. Y. City												
45 Cruiser	16900	45-6	11-10	3-0	6-0	3-4	6-2	Round	2-Lathrop	70 each	13-15	abcdefghpqsuvwxyzCEFGHIJKLMQRST UVWXYZ
48 De Luxe	22000	48-5	11-10	3-4	6-0	3-4	6-2	Round	2 Lathrop	70 each	13-15	abcdefghpqsuvwxyzBCEFGHIJKLMQRST UVWXYZ
48 Express	23800	48-3	11-10	3-4	6-0	3-4	6-2	Round	2 Sterling	200 each	20	abcdefghpqruvwxyzBCEFGHIJKLMNOPQ RSTUVWXYZ
DODGE												
New York, N. Y.												
45 Express	27500	45-0	11-0	2-8	5-0	3-6	......	Vee	2 Lycoming	300 each	35	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMQRSUVWXYZ
DYER MOTORCRAFT												
East Greenwich, R. I.												
38 Speed Sedan	13900- 15000	38-0	8-7	2-4	4-6	3-5	6-2	Round	Optional	200	30	abcdefghijkopqstuvwxyzBCGHIJKLMQRS UWXYZ
38 Speed Sedan (Twin Scr.)	16750 18000	38-0	8-7	2-5	4-5	3-4	6-2	Round	Optional	400	41	abcdefghijkopqstuvwxyzBCFGHIJKLMQR SUWXYZ
38 Express Commuter (Twin Screw)	19500 up	38-0	10-0	2-9	5-3	3-8	6-2	Round	Optional	400	30	abcdefghijkopqstuvwxyzBCFGHIJKLMQR STUWXYZ
42 Express Commuter (Twin Screw	23500- 25000	42-0	10-0	2-9	5-3	3-8	6-2	Round	Optional	400	30	abcdefghijkopqstuvwxyzABCFGHIJKLM QRSTUWXYZ

*See Page 00 for Key to Equipment Symbols

(*Continued on page 27*

STANDARDIZED RUNABOUTS, SEDANS, OPEN BOATS

PRICES—SIZES—EQUIPMENT

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
ACO SEABOAT												
Neponset, Mass.												
16-37	....	15-11½	5-3½	1-9½	2-2	1-5¾	....	Round	Gray	37	25	abcdeftuvwzFJLSWXY
16-41	....	15-11½	5-3½	1-9½	2-2	1-5¾	....	Round	Gray	41	25	abcdeftuvwzFJLSWXY
20-72	....	20-0	6-1	2-1	2-8	1-10	....	Round	Gray	72	35	abcdeftuvwyzBCFJLQSWXY
20-120	....	20-0	6-1	2-1	2-8	1-10	....	Round	Gray	120	40	abcdeftuvwyzBCFJLQSWXY
26-120	....	25-8	6-7¼	2-4	2-10	1-11½	....	Round	Gray	120	30	abcdeftuvwzFJLQSWXY
26 Sedan	....	25-8	6-7¼	2-4	2-10	1-11½	....	Round	Gray	120	29	abcdeftuvwyzFJLQSWXY
ATLAS												
Menominee, Mich.												
19 Runabout	....	19-0	....	....	....	....	....	....	Optional	60	32	
23 Runabout	....	23-0	....	....	....	....	....	....	Optional	125	37	
26 Runabout	....	26-0	....	....	....	....	....	....	Optional	200	45	
30 Runabout	....	30-0	....	....	....	....	....	....	Optional	200	42	
30 Sedan	....	30-0	....	....	....	....	....	....	Optional	400	42	
BANFIELD												
Atlantic Highlands, N. J												
22 Runabout	3050	22-0	6-6	1-10	2-8	2-3	....	Skiff	Optional	106	28	abcdeftuvwzBFMQ
26 Runabout	5500	26-0	7-6	2-0	3-0	2-8	....	Skiff	Optional	200	38	abcdeftuvwzBFMQ
32 Runabout	6500	32-0	8-6	2-4	4-8	3-6	....	Skiff	Optional	200	33	abcdeftuvwzBFJKMQ
BROOKS												
Saginaw, Mich.												
Fleetfoot Runabout	*283	22-6	5-8	1-10	1-8	1-11	....	Vee	Gray	60	24	
16 Vee Runabout	*128 50	16-0	4-5	1-5	1-2½	1-4	....	Vee	Gray	37	22	
290	*312	26-0	5-8	1-11	....	....	....	Vee	Universal	75	23	
228 Open	*301	30-0	6-8	1-11	4-8	4-3	....	Round	Universal	75	14	
217 Open	*378	35-0	8-0	2-0	4-9	4-0	....	Round	Universal	75	12	
	* All models supplied knock-down.											
CHASE-EMERSON												
Norwalk, Ohio												
R.V.	995	16-0	4-6	0-8	1-11	1-9	....	Vee	Van Blerck	25	25	ewzFLMSW
176	....	17½	5-5	0-6	2-10	1-10	....	Vee	Optional	....	Up to 35	ewzFLMSW
CHRIS-CRAFT												
Algonac, Mich.												
100-20 Runabout	On App.	20-0	6-0	1-7	2-5	1-6	....	Vee	Chrysler	75	30	abcdeftuvwzBFLMSVWYZ
101-22 Runabout	On App.	22-0	6-0	1-10	2-5	1-6	....	Vee	Chrysler	75	28	abcdeftuvwyzBFLMQSVWYZ
102-22 Runabout	On App.	22-0	6-0	1-10	2-5	1-6	....	Vee	Chrysler	125	35	abcdeftuvwyzBFLMQSTVWYZ
103-24 Runabout	On App.	24-0	6-4	1-10	2-10	1-7	....	Vee	Chrysler	125	34	abcdeftuvwyzBFLMQSVWYZ
104-24 Sedan	On App.	24-0	6-4	1-10	2-8	1-6	....	Vee	Chrysler	125	33	abcdeftuvwyzBFLMQSVWYZ
105-26 Runabout	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Chrysler	125	30	abcdeftuvwyzBFLMQSVWYZ
106-26 Runabout	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	....	150	35	abcdeftuvwyzBFLMQSVWYZ
107-26 Sedan	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	....	150	34	abcdeftuvwyzBFLMQSVWYZ
108-26 Runabout	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Scrip. or Ker.	200	42	abcdeftuvwyzBFLMQSVWYZ
109-26 Conv. Sedan	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Scrip. or Ker.	200	40	abcdeftuvwyzBFLMQSVWYZ
110-26 Deluxe Sedan	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Scrip. or Ker.	200	40	abcdeftuvwyzBFLMQSVWYZ
111-26 Runabout	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Chris-Craft	225	45	abcdeftuvwyzBFLMQSVWYZ
112-26 Conv. Sedan	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Chris-Craft	225	43	abcdeftuvwyzBFLMQSVWYZ
113-26 Deluxe Sedan	On App.	26-0	6-8	2-0	2-10	1-7	....	Vee	Chris-Craft	225	43	abcdeftuvwyzBFLMQSVWYZ
114-28 Custom R'b't	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Scrip. or Ker.	200	40	abcdeftuvwyzBFLMQSVWYZ
115-28 Conv. Sedan	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Scrip. or Ker.	200	38	abcdeftuvwyzBFLMQSVWYZ
116-28 All Mah. Sedan	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Scrip. or Ker.	200	38	abcdeftuvwyzBFLMQSVWYZ
117-28 Custom R'b't	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Chris-Craft	225	42	abcdeftuvwyzBFLMQSVWYZ
118-28 Conv. Sedan	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Chris-Craft	225	40	abcdeftuvwyzBFLMQSVWYZ
119-28 All Mah. Sedan	On App.	28-0	7-0	2-3	2-10	1-9	....	Vee	Chris-Craft	225	40	abcdeftuvwyzBFLMQSVWYZ
120-30 Custom R'b't	On App.	30-0	7-1	2-3	3-1	2-0	....	Vee	Chris-Craft	225	40	abcdeftuvwyzBFLMQSVWYZ
CRANDALL CRAFT												
Newport Beach, Cal.												
22 Runabout	....	22-0	6-0	1-8	2-4	2-0	....	Vee	Optional	85	....	cdeftvwyzABFSVWXY
15½ Runabout	....	15-10	4-0	1-5	2-1	....	....	Vee	Van Blerk Jr.	25	25	cftwyzFXY
DART												
Toledo, Ohio												
D	....	18-6	5-6	1-6	2-2	1-6	....	Vee	Chrysler	72	33	cdeftuvwyzFLMSVWX
A	....	22-6	6-0	1-10	2-6	1-7	....	Vee	Chrysler	125	37	abcdeftuvwxyzBCFLMSWXYZ
B	....	26-0	6-8	2-0	2-8	1-8	....	Vee	Kermath	200	42	abcdeftuvwxyzBCFLMSWXYZ
C	....	30-0	7-8	2-2	2-11	1-9	....	Vee	Optional	....	....	abcdeftuvwxyzBCFJKLMSWXYZ
DEBASCO												
Philadelphia, Pa.												
17	....	17-0	4-11	2-0	2-0	1-8	....	Vee	Universal	45	30	
18	....	18-0	5-2	2-0	2-0	1-8	....	Vee	Universal	85	35	
DEE-WITE												
Detroit, Mich.												
2 DVBI Inboard	585	16-0	4-6	1-6	2-1½	1-5½	....	Vee	....	....	20	abcetuwyFLMQWXY
3 DVB Van Blerck ins.	985	16-0	4-6	1-6	2-1½	1-5½	....	Vee	Van Blerck	25	20	abcetuvwyzFLMQSWXY
4 Stan. 440 N	1185	19-0	5-9	1-9	2-6	1-10	....	Vee	Gray 437	41	20	abcetuvwyzFLMQSWXY
5 Stan. 440	1285	19-0	5-9	1-9	2-6	1-10	....	Vee	Gray 441	41	20	abcetuvwyzFLMQSWXY
6 Stan. 450	1385	19-0	5-9	1-9	2-6	1 10	....	Vee	Gray 444	55	28	abcetuvwyzFLMSWXY
7 Stan. 650	1545	19-0	5-9	1-9	2-6	1-10	....	Vee	Gray 650	55	28	abcetuvwyzBCFLMQSWXY
8 Stan. 670	1645	19-0	5-9	1-9	2-6	1-10	....	Vee	Gray 672	72	32	abcetuvwyzBCFLMPQSWXY
9 De Luxe 670	1785	19-0	5-9	1-8	2-6	1-10	....	Vee	Gray 672	72	32	abcdeftuvwyzBCFLMQSWXY
10 De Luxe 8	2285	19-0	5-9	1-8	2-6	1-10	....	Vee	Gray 8	140	40	abcdeftuvwyzBCFLMQSWXY
DODGE												
3 East 52nd St., N. Y. C												
1	945	16-3	5-3	1-4	1-8	1-2	....	Vee	Lycoming	40	25	abcdeftuvwyzBFMS
2	2100	21-6	6-4	1-11½	2-3	1-9	....	Vee	Lycoming	115	35	abcdeftuvwyzBCFMS
3, 4, 10	2500-3900	25-0	6-3¼	1-11	2-5	1-11	....	Vee	Lhcoming	125-165	32-38	abcdeftuvwyzBCFGHQS
5, 6, 11	3700-5300	28-6¾	7-5	2-0½	2-11½	1-9	....	Vee	Lycoming	165-300	32-45	abcdeftuvwyzBCFGHMQS
DOWN EASTER												
Camden, Maine												
Down Easter	1805	18-0	5-0	1-8	1-8	1-6	....	Vee	Optional	85	35	abcdeftuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ

***See Page 300 for Key to Equipment Symbols**

(Continued on page 300)

LAND OR SEA—WHICH?

(*Continued from page* 48)

for the family, stove, ice box, sink, electric lights, running water, and all the comforts of home. The boat was in first class condition, had a speed of about 12 miles an hour and the cost was $2350.

The Walpoles lived near Rye, N. Y., and immediately joined the American Yacht Club and were assigned a permanent mooring for the boat. The former owner agreed to deliver the boat at the yacht club and give the new owner a driving lesson. Eventually the craft arrived and Mr. Walpole had his first and only driving lesson. The engine was nothing but a glorified automobile engine with a self-starter, spark, throttle and gear shift. The steering gear was just like an automobile steering gear. The only thing missing was the brake, but a boat slows down instantly when the power is shut off, the reverse can be used in emergencies and there are no long steep hills on the water. The new skipper found that the boat was just as easy to operate as his car, and, after a few attempts, he found that he could pick up his mooring and tie up just as easily as he could put his car away in his garage at home. A little dinghy was lashed to the deck and Mr. Walpole bought a ten pound collapsible rubber boat which, at a pinch could carry the whole family.

The family made several trips of an hour or so out on the Sound, keeping within easy distance of the harbor on account of the unknown and much feared dangers of the deep. Finally the dreaded disaster overtook the venturesome family; the faithful engine hesitated, back-fired and went dead. Panic reigned for a moment, but the boat continued to float peacefully, no other boat ran into them, a hundred angry horns did not begin honking "Get out of the way, I am in a hurry to pass" and no fresh cops yelled "Pull over to the curb, you're blocking the traffic." The sun continued to shine, the water sparkled and everything was exactly as it was before the disaster except that the boat was stationary instead of going ahead. As soon as the family realized that they were not all drowned or likely to be, they returned to normal. The children played around the boat while Mrs. Walpole reminded her dazed husband that this was just exactly the way their car acted when the gasoline strainer was stopped up. Mr. Walpole set to work on the strainer which was similar to the one on his car, gazing fearfully around to see who was going to run over him, just from habit. As a contrast to roadside repairs, he found himself working quietly in a comfortable house surrounded by his loving family in no danger of being run over and nobody bawling him out for blocking traffic. In ten minutes the offending strainer was cleaned out, the engine started and the trip continued as merrily as ever.

Another time a spark plug fouled, but this was simply child's play to a man familiar with an automobile engine. Such events gave confidence to the embryo skipper and made the family realize that there might be less real danger on the sea than on the traffic crowded land. Outside of these minor events they had no serious trouble. Compared to the automobile trip there was no traffic at all. There were no emergency stops calling for hair-trigger action by an expert driver, and even Mrs. Walpole and the older children could take the wheel while the new skipper stretched out at his ease on the comfortable

(*Continued on page* 176)

WHY I OWN A RUNABOUT

(*Continued from page* 51)

mer, just the way we do the car in the winter. It's boat all summer, and the car just lies around idle. We do everything in the boat. When it's a choice of running five miles by boat to get the groceries or five by car you know yourself which way you'll go. The water travel wins every time. And even in rough weather there's a thrill to going places. On those dark rainy, windy days when the old lake is lashed up into a real wicked looking place, it's sport just to get into the oilskins, pull on an old hat and go aboard your runabout. Take down all the flag poles and remove extras and loose equipment, and then slowly back out into the turmoil. Spray begins to fly as you give her a little more gas and she gets her bow out of the water. Here comes a big one! Wow, down into it we go and with a cloud of solid white water on either side of us we rise out and begin to slide across their tops. There's the steamer churning down the lake, we'll go over and give the passengers a thrill or two. With throttle wide we descend upon the slow moving craft and with spume covering us for thirty feet on each side we sweep past the bigger craft. Faces come to the windows, and people excitedly talk with each other, watching. We just know they are telling themselves what fools some people are. But the rain clears up and as the misty clouds rise from the lake we continue our search for excitement, and thank our lucky stars that we don't have to ride indoors always, and can get out into the open once in a while. Here surely a man is captain of his fate and master of his soul.

All good things come to an end sometimes though, and because we don't go to Florida, September means time to put the boat up until next spring. Sad month, that. But October is a little better and by the time March comes there are a million plans afoot for the coming year, and so it goes. Just as they used to say about the new automobile owner, "Once you've driven a car, you'll never be without one." That's true about motor boats, too, just the same. From that little one-cylinder hesitation motor boat all the way up to my present mahogany craft, I have never been without a boat.

And I have reason to believe that once a man gets behind the wheel of his own runabout he'll never be caught again without one. At least history records no case of the man who got out on the water and really tasted the joys of motor boating, who come back and decided there was nothing in it for him.

THAT DEEP SEA MOTOR

(*Continued from page* 54)

Joe said he supposed that they went with the rest of the motor. So I took a sight on the lighthouse to the north and a tree on the shore to the east and walked ashore, Joe preceding me with the boat, but not scattering any roses or anything like that, of course. In fact, all he did was to hit me with an oar a couple of times, whether intentionally or on purpose I have never been able to determine. A considerable portion of the population of Winnetaska, the summer colony of which I happen to be the Jimmie Walker (but not the Johnny Walker, you understand) was lined up on shore to greet me, and to ask me questions. Or rather question. They had only one. They wanted to know if I had lost my motor. If I hadn't, I don't know what the high dive was for.

After landing on the shore, and a few of the wise-cracking inhabitants, I leaped into my trusty bus and drove madly to the coast guard station. You can take that word madly anyway you like. Well, my government did not fail me in my hour of need, or perhaps my five hours of need is what I should say. For five hours, until the sun had gone down in a blaze of glory on the western horizon, without arousing any particular admiration as far as I was concerned, we dragged the bottom of Lake Michigan at the spot where the motor went down, as well as I could describe it. Then we moved on about a quarter of a mile and dragged the spot where the motor went down as well as Joe could describe it. It is the only time I ever had a drag with the government, and I can't say that I enjoyed it. But the lake refused to give up the motor, and so we had to.

Late that night the Son and the Son-in-Law arrived home, too late to do anything, but not too late to say anything. Then at daylight they went out and got the motor. But they deserve no special credit on that account. They had one great advantage. They didn't know where I had lost it. I feel sure if I had not known where it was I could have found it myself. I don't know anything harder to locate than a spot on the water even with the help of a lighthouse and a tree, especially when someone has evidently moved the lighthouse and the tree when you weren't looking. But they found the motor, not over two hundred yards from where it was.

We devoted that day to an earnest endeavor to breathe the breath of life into what was probably the dampest motor in America. I said dampest. We did everything but roll it on a barrel. Once in a while it would give a despairing wheeze and cough up a couple more quarts of water, although we had wrung all of the water out of it the first thing we did. If you think a sponge absorbs water, sink an outboard motor in it for ten or twelve hours and you will have enough to supply an ordinary city for domestic purposes. We took that motor apart and dried each piece separately in the presence of reputable witnesses, or at least some of them. Then we put it togther again and got a gallon more of as nice water as ever came out of a drowned motor, which isn't very nice. After eight hours of this we decided we must have struck a flowing spring.

So at daylight the next morning The Boy loaded the motor into his car, and when they opened the factory a hundred and

(*Continued on page* 470)

WILL THE YACHT CLUB SURVIVE?

(*Continued from page* 69)

Let no loyal yacht club member take offense at this. Here is the reason, viewed coldly: The growth of these same water front service stations renders it less necessary for a boat owner to claim the hospitality of other yacht clubs. He can get what he wants or needs from the service stations, pay for it, and pass on. If he should need a tow, he can get them to send after him, or he can engage a commercial small boat to do it. And if he is in distress he can depend on the inborn fellowship of the sea for aid from any passing motor boat or larger vessel.

But he can't get fellowship from a service station. It doesn't come through a hose or out of a faucet. It isn't delivered in crates or packed in ice. And to own a boat without having the fellowship of other boat owners with whom to swap experiences, exchange ideas, invitations, and all manner of small courtesies, is to get less than half of the potential pleasure out of your outfit. Here is where the yacht club becomes important. It wasn't originally organized as a type for fellowship, but it must survive as a haven for it just the same. Its members must, as always, be made up of folk from about the same social and economic classes, although there will be sufficient exceptions to this rule in every membership to give it vigor and adaptability.

There is going to be some mortality among yacht clubs in the next decade. Rough as this sounds, it is certain. And yet the yacht club as a type is here to stay with us, but only the fit ones are going to survive the competition with service stations. Those clubs which try to compete will have a hard time doing it in most cases. It is an outstanding fact that those yacht clubs which lead the field in most localities do not stress this end of things in club life. Many of them have never furnished their members with yard service or storage. Yet they have been dominating forces in the sport—for more fundamental reasons. They have been strong, well organized social centers, about which active sportsmen in the game naturally gather.

The yacht clubs of the future will be the active yacht clubs, those which make things happen in the sport in their locality. Those which exist only as misnamed boat yards are destined to disappear—or bestir themselves—before the advancement in water front facilities maintained as business enterprises. No club can compete with a business concern in such services across a period of years. Changing administrations, committees, budgets, the variations in human nature, the entanglements of memberships,

(*Continued on page* 176)

MORE YACHT HARBORS EVERYWHERE

(*Continued from page* 71)

city and caused an acute shortage of storage space. Consummation of the plan offered the City Council would alleviate the immediate condition, **Buffalo yachtsmen state.**

Within the states of New York and New Jersey, unusual interest in yacht basins has been manifested throughout the summer. The City of New York included two such basins in their projected development of Riverside Drive. The Board of Estimate also expressed its intention of granting approximately $1,000,000 for the construction of ten 80-foot piers at Sheepshead Bay, the docks to be used for pleasure boats only. The Great Kills Marine Park development has been approved and dredging necessary for construction of a sheltered harbor in the Lower Bay will soon be started. This will afford yachtsmen an excellent anchorage and will be only one along the exposed shore.

Up the Hudson River, the Edgewater Basin opposite 125th Street, New York City, continues to serve to capacity. Elbert W. King, executive director of the Palisades Interstate Park Commission will ask the New Jersey legislature, this winter, for $50,000 to build an additional basin at Alpine, opposite Yonkers, where some of the yachtsmen who request space in the Edgewater development may find anchorage.

Forty miles from New York City, the Cragston Yacht & Country Club has purchased the old J. Pierpont Morgan estate and will convert it into a club for yachtsmen and business men. A basin will be constructed to afford sheltered anchorages for owner-members, and a fleet of boats will commute to the city.

In New England, Boston yachtsmen are preparing to submit, to a new and more receptive administration, plans for a municipal yacht basin. In the meantime, the Noyes Marine Sales Company has constructed a service station and small basin within the city itself so that commuters may land there and have their boats cared for during the day. At Duxbury, Mass., the yacht club has retained the engineering services of Stone & Webster looking toward the construction of landing floats and a breakwater. New Bedford, Mass. newspapers, supported in the campaign by local yachtsmen, are presenting a series of alternate plans for the improvement of the harbor and have achieved unusual success in bringing the matter to popular attention.

Such records of specific cases are only a few of those which have been called to the attention of the National Association of Engine & Boat Manufacturers. The specific cases, however, are cited to illustrate the extent to which interest has been aroused and the possibilities for even greater activity upon the part of other municipalities.

YACHTS AS AIDS TO BUSINESS

(*Continued from page* 73)

worked on Saturdays for five years. His home on Fifth Avenue is where he spends much of his time re-reading the classics and history.

"Competing with him are many men who work eight and ten hours a day, day in and day out, and they wonder why they cannot catch up. The simple reason is that Mr. Keys has taken his subconscious mind into business, whereas they have not."

After the above discussion it is hardly necessary to tie these thoughts in with yachting. Any one with imagination can easily conceive how a yacht may become a real business asset.

"Coming events cast their shadows before" has been happening with such high frequency within the past twenty years of invention, we've almost stopped looking at the shadows. Roger Babson's inspiration for his now famous Babson statistical charts derived from Biblical authority shadows ages old. By the same token, it would seem most likely that a correct idea of the future of yachting may be gained by a review of past activities.

From a survey of the field of yachting since the year 1916 many interesting facts are revealed. The outstanding bit of information indicates that the yacht is evolving from a vehicle of sport to a floating residence.

In 1916, 80 per cent of all registered yachts were propelled by gasoline motors. In 1928 this percentage had dropped to 65 per cent. The average length of gas motor yachts in the former year was 60 feet, declining to an average of 50 feet in 1928.

At least half of all sailing yachts in 1916 used gasoline for auxiliary power, while in 1928 but 20 per cent were so propelled. The average lengths of this type of vessel fell from 55 feet to 50 feet.

Early in 1916 diesel driven yachts were beginning to attract the attention of yachtsmen and by 1928, 13 per cent of all registered yachts were powered with the much safer and more economical diesel engines. An astounding fact uncovered was that the average length of a diesel yacht in service in 1928 had reached 135 feet.

In 1928, 4 per cent of all auxiliary sailing yachts were powered by diesel engines, the average length of this type of craft being about 105 feet.

A diesel yacht of as little as 135 feet in length, if properly designed, is safe for ocean travel and is large enough to accommodate the owner, his family and guests—in addition to the necessary crew.

Bearing out the statement made in the beginning of this article, it has been found that men of affairs today, instead of maintaining large country estates—the disadvantages of which often outweigh the advantages—are actually making their residences, for a good part of the year at least, on their yachts. Many of the craft as now designed and built contain all the comforts and conveniences of a fine residence and, instead of being confined to a few acres of land, the world actually becomes the estate of the owner of such a vessel.

With radio communication a yachtsman is just as accessible on sea as he is on land, and many times, more so.

Our own statistician produced the interesting figure that if all yachts built in America since 1916 were placed in parade formation—one boat length apart—the line would reach 43 miles in length. With the increasing interest being manifested in yachting and the constant increase in size of the yachts it rather taxes the imagination to prophecy just where this figure will go to within the next twelve years.

(*Continued on page* 204)

ALL ABOUT AUXILIARIES

(*Continued from page* 57)

cruisers went by without stopping, but they did us no damage as they passed very wide of us. They were afraid, I suppose, of wrapping some of the wreckage around their propellers. But all this time my motor boat friend was cussing out motor boats a mile a minute. He passed entirely through the English, Swedish, Danish, and Spanish languages and was starting on the Sanskrit when he lost breath and fell down in an apoplectic fit.

ANOTHER GOOD MAN GONE WRONG

It will, perhaps, be an anticlimax if I say that the High-Powered Executive we pulled from the water, along with his male secretary, briefcase, and documents, asked us to drop him at City Island so that he might place an order for a new express commuter. The real moral of my story concerns my friend who had always kept away from sailboats because of his inhibitions about swearing. In ten short minutes he had originated a line of profanity that I have never heard equalled. When he recovered from his apoplectic fit he bought a fine auxiliary sailboat and is now one of the most ardent and vocal sailors of my acquaintance. You may have heard him that thick, foggy morning last summer when you went into Sand City at four bells and a jingle.

Some of you, no doubt, have been deterred from graduating from motor to sail by the fear that sailing is a lot of trouble. Well, it is, as I am the first to admit. If you want to take an afternoon sail in a sailboat there are many troublesome things to be done. You have to take off the sail covers as a starter, and cast off the sail stops and haul out the foot of the sails along the booms, and hoist the sails, and coil down the halliards, and so on—all tiresome, uninspiring work. Then if a man happens to be a fanatic on the subject he feels it obligatory to his pride to get under way from his mooring without resorting to motor, and that, in a crowded harbor and a fresh breeze of wind, is extremely dangerous. You find, as you leave your berth, that the wind always blows into the harbor. This necessitates a lot of tedious tacking, back and forth, sailing five miles to make good three (not to mention the risk of misjudging distances and barging into wharves or anchored vessels), and by the time you have cleared the entrance to the harbor the afternoon is half spent.

By this time, also, your guests, if any of them happen to be mere landsmen, are all lying around the cockpit, getting in the way of the jib sheets and the backstay runners, and the whole party is ruined. Two miles outside of the harbor you glance at the clock and find it is time to go back again. So you jibe

(*Continued on page* 468)

YACHTS OF MODERATE SIZE

(*Continued from page* 64)

yachts owe their success and the wealth of space available for comfort.

Nor has the hand of the interior decorator been missing. Where a decade ago, appearance and artistic treatment was a very secondary matter and often left to some boatbuilder who was all right with a jack plane but blotto on art, the aesthetic qualities of these yachts ranks right up with the big fellows. Here again, standardized construction has introduced the specialist. Hangings blend with cushion fabrics and rugs.

And in the practical equipment, such as china, silverware, linen and the like, good taste has kept pace with completeness of equipment. Where ten years ago the purchaser of a boat was astounded to find her equipped with anything, he will now bellow his head off if his wife does not like the embroidered hand towels. Builders have vied with one another in both the pleasing appearance and completeness of equipment to the point where everything is furnished except licker, but it is probable that the seller can put you in touch with a reliable bootlegger.

Along with comfort, safety and beauty, speed has very decidedly stepped up. The old wallowing craft that jogged along at eight or ten miles an hour and followed the bend of every wave as well as creating some motions of her own, is out. While extreme speeds are expensive, few are now satisfied with less than fifteen to twenty miles an hour cruising speed, and the more modern designs are achieving this speed with no greater fuel consumption than the old wallowers, along with increasing popularity of twin screw dependability.

All in all, the moderate size yacht of today is a gem. She provides all the comforts of the larger yacht of the past. She may be taken into harbors and explore sequestered nooks too shoal for her larger sisters. She may be easily maneuvered in cramped quarters and you may almost tie her up in your front yard if you live near a sizable brook. She is inexpensive to acquire, to feed and to maintain. She is docile and will go where you tell her. She will carry you in the utmost safety, thousands of miles to the most interesting places. She gives you relaxation and privacy totally unknown ashore. She is a means to health and companionship, incomparable.

THE PRESS AND MOTOR BOAT RACING

(*Continued from page* 67)

their boats, the clubs which they represent, their home towns, and the make of their boats and motors. The task is a heavy one but very essential to smooth running of the races, both from the standpoint of the scorers and the press men.

On the day of the races, the reporters and picture men should be given the welcome of guests, for, most of them would much rather be sitting at home. Their attendance is a part of the day's work and they consider it so. To place barriers in their paths is to force upon them a dislike for racing, an attitude which will be reflected in all future associations with the sport.

For the benefit of the press, it is well to establish headquarters, with some one present to pass out badges, issue instructions and answer all questions. Assure them that there will be adequate transportation facilities and tell them where the telephones are located. Extend every possible courtesy. The results will be reflected in the stories carried the following day and in the newspaper attitude toward the sport.

Aboard the committee boat, have tables where the men may work and also reserve elevated views from which the photographers may secure good shots of the starts. To save the committee from undue annoyance, it is well to appoint one local man, preferably the publicity chairman, to the task of serving as contact between the scorers and the newspaper men so that a carbon of the sheets may be delivered to the reporters immediately after each race.

It is quite essential that the factor of speed is considered. Often officials will tell newspaper men that the information is unofficial and will not be ready for publication until a week later or even a month. The absurdity of such statements is apparent enough, for, every man knows that news is news for a few hours and after that it is of interest to no reader, save in recapitulations written for magazines.

In any event, the newspaper men should never be isolated from the committee or placed upon a separate boat, for, communication systems over water are most unsatisfactory, particularly while boats are racing. Committees fearing annoyances from reporters assigned to cover the regatta over-estimate the sanctity of their positions and admit the failure of system which would eliminate all such complaints.

Drivers can assist in the publicity program by remembering that all information is taken from entry blanks. Switching of boats without informing the scorers and the judges results in some inaccuracies for which the drivers blame the press. Last summer, an entrant in one race borrowed a boat from a driver who was not competing in that particular class. The boat came in first, the driver hurried to the pits and the wrong man was credited with a win and was highly congratulated by his local newspapers. Although no indignation meeting was held, the mass of drivers were quite of the opinion that the press of this country was very stupid.

Winners of each race would be performing an excellent service to photographers by swinging off the course and idling back to the committee boat for shots which would be used as further publicity on the sport.

Suggestions outlined in the foregoing have been assembled for the benefit of race committees who would serve the sport well by observing the principal plan. It is quite needless to point out the power of the press or the influence of its representatives, but there seems to be no other sport or public event in which newspaper men are less welcome than at motor boat races. Yet, those very men who fail to appreciate the value of the printed word, are the same yachtsmen who have dedicated their lives to the sport and who make great sacrifices of time and money to advance the spirit of racing. The indifferent attitude has been quite incomprehensible, but we hope that it can be attributed to failure of appreciation rather than an aggressive campaign pointed toward that willing vehicle which can also be indifferent enough to deaden the sport or enthusiastic enough to lend it immeasurable impetus.

Sailors Beware!

. . . of the China you Ship on the Sea

WHETHER you're the lord high admiral of a put-putting "Polly" or the salt bitten skipper of a keeled palace . . . your galley should be your chief boast and greatest attraction!

Remember, when guests come aboard you're more than the skipper . . . you're the host. And in land-lubbers' eyes that's where you'll stand or fall as a worthy member of Neptune's own!

Your ropes may be coiled to perfection, your brass may shine with a mirror's brightness, your crew be as alert and dashing as a destroyer's manoeuvres, but if your china and crystal aren't up to the mark, you're down on the books as a barnyard mariner! And all the badged caps and brass buttons in the world won't make them change their minds.

Then here's hoping your galley is as smartly rigged as your tops! And if it's not, here's the hope that you'll let Ovington's be your pilot to the ways and means of making it so. It needn't be expensive. We can fit you out with a dinner set, complete for six, emblazoned with your club and yacht flags for as little as $63. And crystal goblets too, nautical and nice, for as little as $37.

Three weeks from the day you request designs we'll have you shipshape and seaworthy in the highest social sense of the terms.

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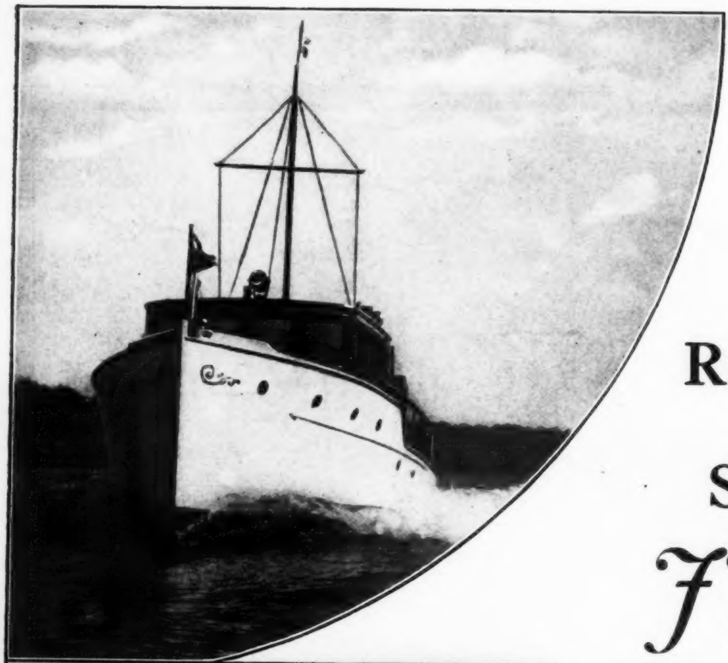
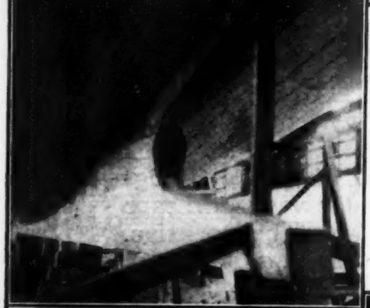


Vinyard keels are cut in one-piece from Delaware White Oak.



Only the best edge grain Douglas Fir, 1⅜" thick is used for planking. Keel is 5" thick.

Frames are steam bent 2" x 2" Delaware White Oak spaced on twelve-inch centers.

Vinyar

50 AND 55-FOOT
TWIN-SCREW MOTOR YA

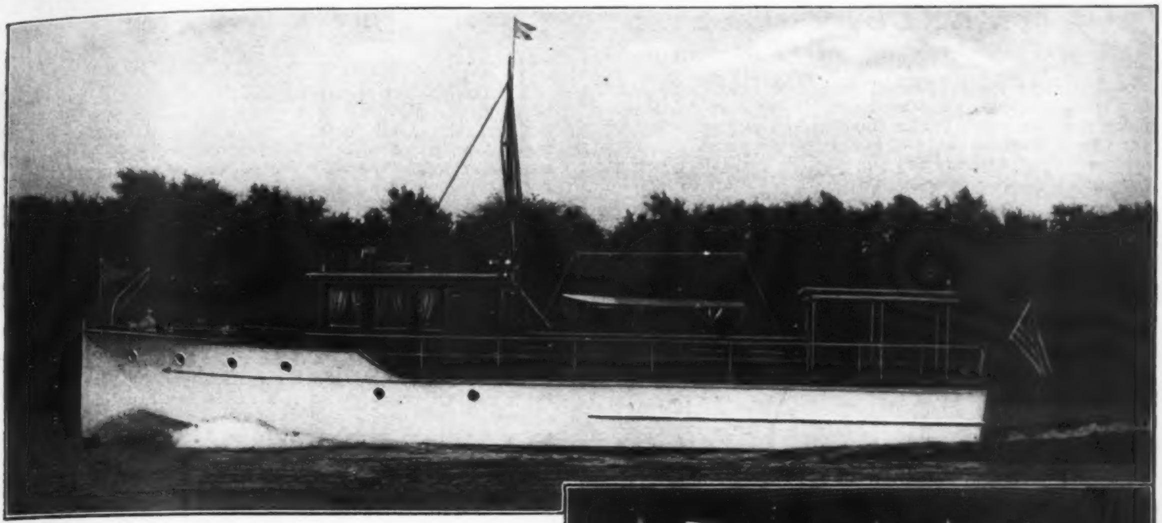
Rugged Strength
and
Solid Comfort

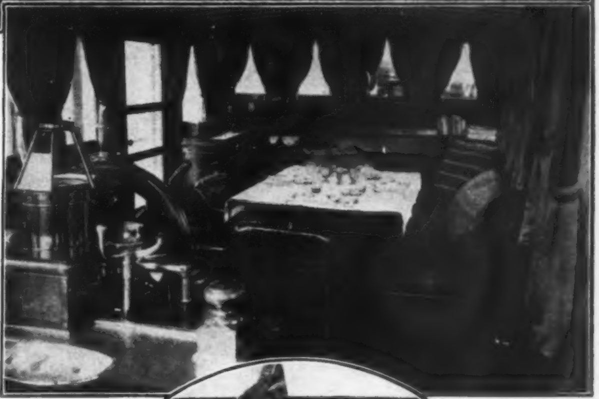
FOR thirty years Vinyard craft have been notable for their graceful beauty molded in hulls of enduring ruggedness. Pleasure ships that fearlessly breast the brine and defy the ravages of time because they are constructed of only the best materials by master naval craftsmen, according to finest practices of custom building.

The oversize strength of Vinyard cruisers is emphasized by many superior features of structural details. For example, the keel is cut in one piece from sturdy Delaware White Oak; the frames are 2" x 2" steam bent of the same timber, while 1⅜" Douglas Fir edge grain planking is used. All fastenings are heavy brass or copper rivets. All timber is air-dried for one year before being used.

No written description can adequately convey to you the full import of Vinyard's standard for strength, quality and workmanship, as that received when personally inspecting these cruisers under various stages of construction at our plant, where every day is visiting day for yachtsmen. Come to Milford and let us show you how Vinyards are built. Then you will understand, too, why Vinyard cruisers command a very high resale value.

Added to the iron-tough strength of Vinyard Fifty and Fifty-Five Foot cruisers you have an arrangement of accommodations unsurpassed for livableness, spaciousness, completeness and comfort by any craft of equal size. The owner's cabin has full size double bed in addition to extra upper and lower berths, forming seat





Enclosed bridge deck saloon.

when not in use, dresser, full height clothes locker and private lavatory with tub shower.

The guest room has double bed and individual lavatory. Additional guest can be accommodated over night on comfortable berth in lobby. The galley is full width of ship and complete in every detail. Crew's quarters for two are provided in forecastle. The deck saloon is large enough to set a table for eight and for dancing or other socials. Accommodations on the fifty-footer are similar to the above with the exception of slightly different provision for guests. Throughout living quarters a system of natural ventilation is provided.

Vinyard cruisers are one-man operated from centralized controls on bridge. Power is furnished by two 150 H.P. Sterling engines. Hot and cold running water is supplied to all outlets under pressure from Delco system. Electric current is generated by independent Delco lighting plant. Frigidaire electric refrigerator is also standard.

Vinyard cruisers are furnished complete with carpets, drapes, bed linen, china and silverware, kitchen utensils, table linen, etc. In fact, everything except food.

Write today for complete information.

VINYARD SHIPBUILDING COMPANY

Designers and Builders of Yachts and Cruisers of the Highest Class

MILFORD, DELAWARE

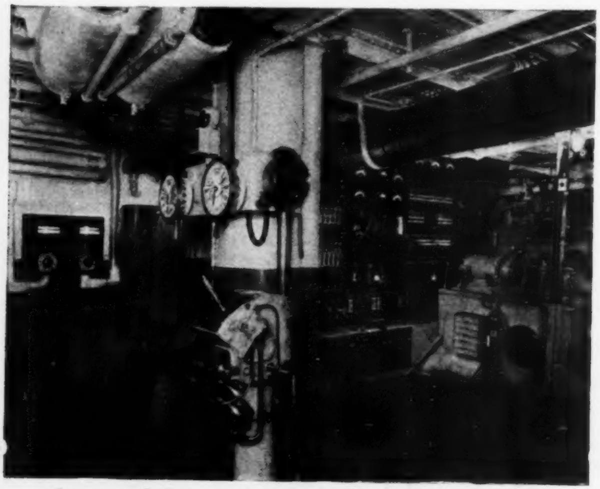
View of cockpit from aft cabin.

Looking forward from owner's cabin.

CARLL TUCKER'S SCHOONER MIGRANT

(*Continued from page* 75)

closed-in compartment finished with dull teak panelling. As in the main lounge, there are natural color linen curtains with block print designs. Wicker furniture is used here instead of the Queen Anne furniture elsewhere on the yacht. There is a commodious sofa, chairs and tables. It is particularly, a setting for tea or cards.



A corner of the engine room, showing the control station and large electrical panel board

The dining salon and its fittings were specially designed to meet its placement forward of the main lounge on the lower deck. It is a small room, 12 feet square. A built-in tip table is used with a normal seating capacity of eight persons. It may be extended to seat 12. A built-in sideboard provides housing for the owner's plate. The chairs are covered with dark green damask and the room has been finished in English oak in harmony with the adjoining main lounge.

Aft, on the cabin deck, are the spacious owner's quarters, panelled with knotty pine which provides a light antique finish. There are two built-in berths and the furniture includes a sofa, dressing table, desk and cozy chairs—the latter in Queen Anne style. The room is about 18 feet wide and 12 feet long. Two baths and two roomy closets are included.

The other staterooms are finished in painted wookwork in creams and tans and all the furniture is built-in excepting the chairs. There are bureaus, chiffoniers, and night tables. Roomy clothes closets have been provided for all of the staterooms and there are five baths. A pleasing feature of these staterooms, all of which are located on the lower deck, is the skylight ventilation which has been installed in each. The lower passage, connecting all staterooms, is in natural finish butternut, light tan in tone.

A large stern seat has been built on the main deck and there are deck sofas finished in specially waterproofed, blue leather.

Quarters for the crew, located forward on the cabin deck, include seven officers' staterooms, an officer's messroom, and eighteen berths in the fo'castle. The crew includes two wireless operators.

Supplementary boat equipment consists of a 28-foot owner's runabout, a 28-foot crew's boat and two 26-foot life boats. Other equipment includes a metal mike, a gyroscopic compass, a refrigerating plant, a thermofan system, large electric plant and hot water system.

A FLYER OF DISTINCTION

(*Continued from page* 76)

Steerer, a nearly infallible gear, with velvet touch; the Fairform Electric Bilge Pump of sturdy character; the Fairform Lighting Fixtures of chaste design, all of which are standard equipment on their craft.

In addition to these patented developments, the Huckins Company manufactures its own steering wheels, controls and practically all the bronze fittings that enter its product, making as nearly a self-contained yacht building plant as there is in the country.

Produced where working conditions are ideal and labor moderate and plentiful, a twelve-month manufacturing year results in low cost of yacht and consequent high value of product. Although Jacksonville is far removed from the centre of the yachting market, a veritable host of winter visitors go through the immaculate Huckins plant annually. Recently the company has opened the Florida Yacht Basin for the accommodation of visiting yachts, on the St. Johns River and has already entertained a fleet from all parts of the Atlantic and Lakes.

In addition to the 45-foot model with its pair of 200 Kermaths and a sustained cruising speed of twenty miles an hour, the first 54-foot model went overboard in December. She is owned by David M. Goodrich of New York who was also the owner of the original Fairform Flyer Minim.

The 54 follows closely on the lines of the 45. She is equipped with a pair of Sterling Dolphin Specials, giving her a sustained speed of 24 miles. Her deckhouse is somewhat larger, the masters accommodations are almost identical to the 45 with an owners stateroom and toilet room forward of the deckhouse, a large main cabin aft, with adjacent toilet room and bath room, followed by galley. While the 45 provides for a one-man crew, the larger model has crew's quarters for three men.

First in the field to install as standard equipment, both models have Crosley Radio and electric phonograph nicely blended into cabinet work above the writing desk. Ceilings are lined with a sunfast fabric of cheerful golden hue, lighting fixtures are provided with hand painted parchment shades with sturdy Monel clasps and all the way through the boat, the artistic hand of the decorator is in evidence.

For greater silence and freedom from vibration the entire power plant is cushioned on rubber by means of the Fairform motor mountings, Fairform ball-bearing rubber bulkhead bearings, Fairform silent shaft log—all patented features exclusive in the Fairform Flyer.

In addition to speed and a degree of luxuriousness more to be expected on yachts of twice the size, safety and freedom from fire risk has been assured by the use of watertight bulkheads, sufficient to keep the boat afloat even if the hull were ruptured, complete segregation of fuel tank in its own compartment, and isolation of power plant in a positively ventilated compartment, making the Fairform Flyer an epitome of comfort and the safest vehicle known to man.

NEW SIX AND EIGHT CYLINDER DIESELS

(*Continued from page* 131)

acts as a distance piece between waterbox and base, is also made of semi-steel, but can be made of aluminum if desired. The waterbox is of semi-steel, fitted with removable liners which are ground to an automobile cylinder finish. These liners are fitted at the top with copper asbestos gaskets and at the bottom with rubber grommets and stuffing box.

Cylinder heads are of a special Bessemer design, cast individually of nickel semi-steel, which are light in weight and easy to remove. When completely assembled, the cylinder heads consist of air starting valve, fuel injector, and exhaust and intake valves. The exhaust valves are in one piece, fabricated from the finest heat-resisting metal available, while the intake valves, also in one piece, are of a special steel developed for this purpose.

Lubrication of these engines is by means of a plunger pressure pump and lubricating oil transfer pump, both of which are built in the engine. Fuel injection, as in all Bessemer Diesels, is of the mechanical or airless type, pressure being furnished by built-in plunger type injection pump. The fuel injection system of these engines also includes Duplex Fuel Oil Strainers, pressure regulator, fuel oil manifold and accumulator and shut-off valve to each injector.

Starting and reversing are by means of compressed air which is furnished by a compressor built into the engine. A maximum air pressure of 250 lbs. is required for starting or reversing.

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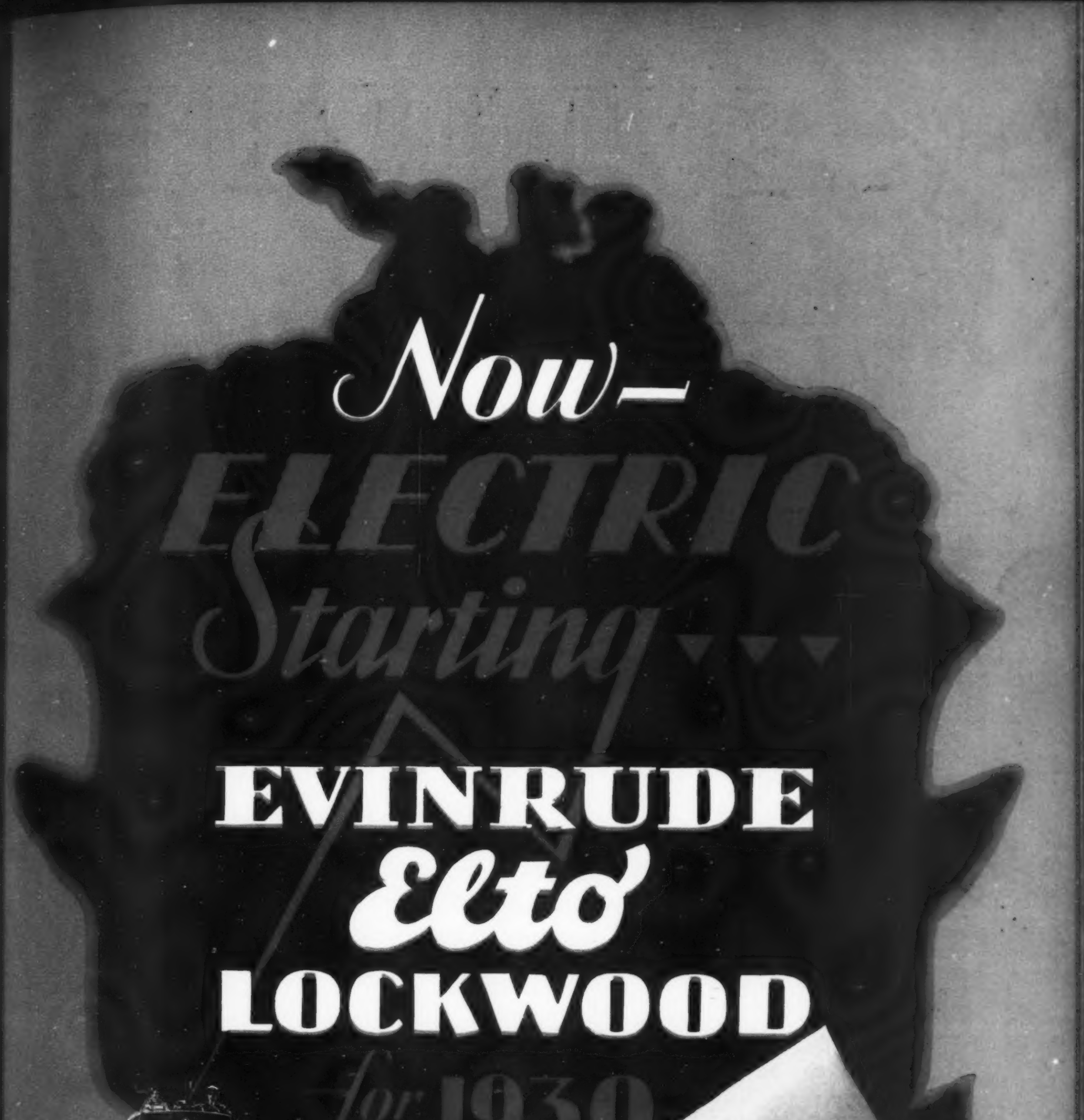

Now—
ELECTRIC
Starting . . .
EVINRUDE
Elto
LOCKWOOD
for 1930
OUTBOARD
MOTORS
CORPORATION
—plus "FOLD-LIGHT"
world's Lightest Twin

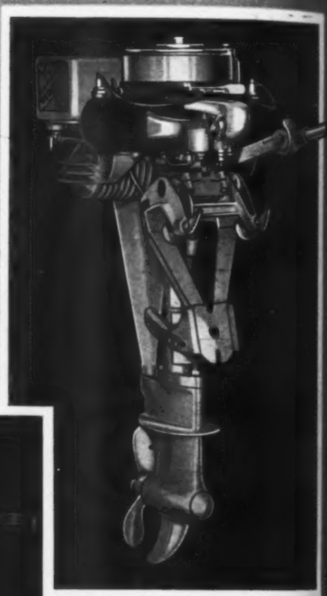
OUTBOARD MOTORS CORPORATION

EVINRUDE

ONLY twenty years ago the world first heard of the Evinrude motor and Ole Evinrude, its inventor. Today the fame of both the name and the man is as far flung as the seven seas—a fame now intensified by the forming of Outboard Motors Corporation. For Ole Evinrude's presidency of Outboard Motors Corporation *re-establishes* his association with Evinrude Motors and the Evinrude organization.

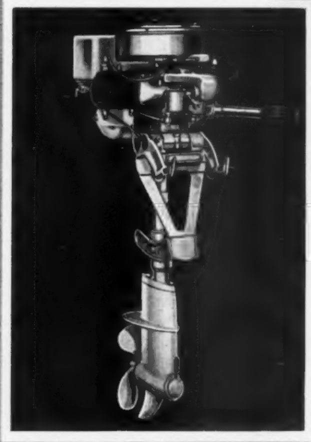
Ole Evinrude is back with the outboards that for twenty years have carried his name . . . . . back to Evinrude motors now built in ***several sizes*** instead of one size—motors that now travel distances in ***one*** hour that once required ***five.***

But . . . , overshadowing even Evinrude organization attainments of the past is what Ole Evinrude and a talented group of engineers now give to the boatman . . . . ELECTRIC STARTING !



EVINRUDE *Fastwin*

14 H. P., only 82 lbs., 5 to miles per hour. Simply a smal edition of 20 H. P. Speeditwin — only ⅝″ shorter, only 1⅛″ na rower. Roller and ball bearin on crankshaft, connecting propeller and vertical drive shafts. Under-water silencer, waterproof magneto, propell vacuum cooling. With Eas Rope Starter, $190.00.



EVINRUDE *Fleetwin*

7 H. P., only 58 lbs., 4 to 25 miles per hour. A splendid choice for family boat or youngster's hydroplane. Ball and roller bearings on drive and propeller shafts. Waterproof magneto, propello-vacuum cooling. With Easy Rope Starter, $155.00.

Speed with Service Service with Speed

Engineered first of all for service, Evinrude motors have also developed brilliant, record-making speeds. For three consecutive years, the Evinrude SPEEDITWIN has been the world's fastest twin-cylinder outboard. Never. . . . . never has Evinrude speed been equalled with less than four cylinders. Here is 1929's remarkable Class C official record—nine victories out of a possible twelve:

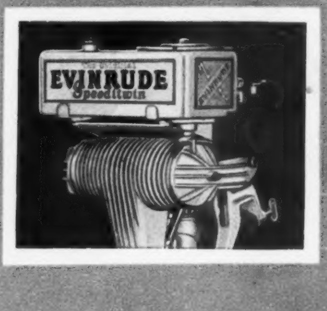
43.711	M. P. H. Mile Time Trials, Division I, Statute Mile.
43.192	M. P. H. Mile Time Trials, Division II, Statute Mile.
42.35	M. P. H. Five Miles, Division II.
40.089	M. P. H. Ten Miles, Division I.
39.4735	M. P. H. Five Miles, Division I.
38.59	M. P. H. Ten Miles, Division II.
37.094	M. P. H. Mile Time Trials, Division II, Nautical Mile.
35.7853	M. P. H. Fifteen Miles, Division I.
34.045	M. P. H. Mile Time Trials, Division I, Nautical Mile.

Simple Design Throughout

The greatness of Evinrude design is the attainment of brilliant performance with simple engineering that anyone can understand.

Ball and roller bearings are liberally used to reduce friction. Motors are valveless. Cooling is by propello-vacuum, without a single moving part. Carburetor is spray-proof and automatic at all speeds.

Send for FREE Evinrude 1930 Year Book, showing Evinrude features in detail.

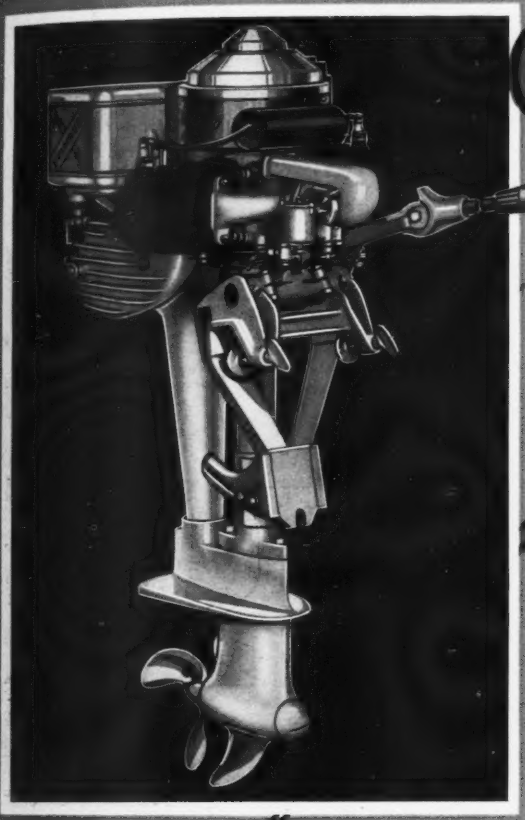


20 H. P. *Speeditwin*

A 25-mile motor on light run bouts and 40 on hydroplanes— one of the easiest starting of th high powered outboards a unexcelled where both servi and speed are demanded. Ba and roller bearings throughou underwater silencing without l of power, waterproof magn propello-vacuum cooling, ea rope starter. Price, $230.00.

with the New ELECTRIC *Starting*

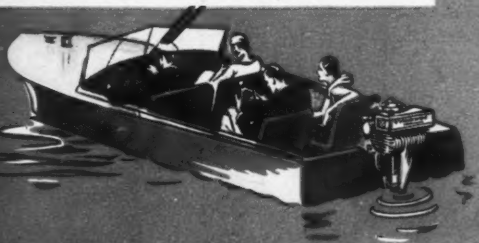
Speeditwin



Now You Simply Touch a Switch!

A single, flip-of-the-switch — vastly more simple than automobile starting is commonly known to be! No clutch to disengage, no starter pedal to press — no gears, no springs, no noise. Instantly, the **electric starting** EVINRUDE Speeditwin whirls ten times faster than human hands could spin it.

Starting is immediate, and recharging of the battery is automatic. Running lights and spotlight are generously supplied with current.



22 H. P. ELECTRIC STARTING *Speeditwin*

World's de luxe twin cylinder outboard, with full 22 H. P. for heavy runabout and cruiser service. Every underwater part streamlined to the last detail, including underwater silencer outlet which is formed out of the anti-cavitation plate. Ball and roller bearings throughout, Propello-Vacuum cooling, auto-type carburetor. Complete with 6-volt storage battery, generator, switch, cables, etc. Price $300.00.

EVINRUDE
DIVISION
Outboard Motors Corporation
Ole Evinrude, *President*
Milwaukee, Wis.
U. S. A.

All EVINRUDE Dealers Also Sell the **FOLD-LIGHT** *"The World's Lightest Twin Outboard"*

OUTBOARD
MOTORS
CORPORATION

Elto

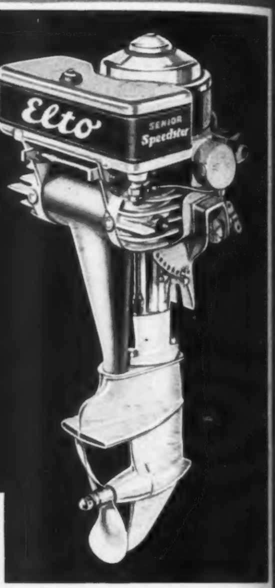
THE finest motors Elto ever built — this fact is plainly evident to all who view the Elto line for 1930. The genius of Ole Evinrude, supplemented by the talent of the notable engineering group now associated with him, has been liberally applied to bring new refinements, new perfection to this famous line.

A new Quad makes its bow — the supreme motor for all who want the final word in outboard power. *Electric starting,* of course, and with electric starting an array of advanced features that lift the Quad beyond comparison with any other motor.

Elto announces, too, the new Senior Speedster, a fast, powerful model exceptional for its staunchness and rugged dependability. Just right in size and power for average runabouts and outboard cruisers, **electric starting** makes the Senior Speedster an ideal motor for such service.

The Service Speedster and the **Lightweight,** swift and sturdy motors that have won loyal preference from many thousands of owners, again represent the outstanding values in their respective classes.

Send for complete catalog of Elto Motors. Address Elto Division, Outboard Motors Corporation, Department F, Milwaukee.



New ELTO *Senio Speedster*

(Electric starting model shown above.)

Two cylinders, 2½" bore, stroke, 24.5 cubic inches displacement, 14 H. P. Built exceptional ruggedness for duty service on runabouts, and auxiliaries. Roller on crank pins. Compres release for easy starting. underwater silencer.

Senior Speedster, Price $215.0
With Electric Starting
Equipment, $265.00.

ELTO *Speedster*

Two cylinders, bore 2½", stro 2", piston displacement cubic inches, 7 horsepower. E tremely popular for use on family boats, runabouts, smaller sea-sleds, sea-skiffs, Easy starting, dependable.

Service Speedster, 7 H.P.$165
Hi-Speed Model, 11 H.P.$190.0

ELTO *Quad*

(Without Electric Starter. Identical in all other respects with Electric Starting Quad.)

Four cylinders, bore 2½", stroke 2½", 49 cubic inches piston displacement, 35 H. P. Cylinders cast en bloc, roller bearings on crank pins, new type counterbalanced crank shaft with integral rotary disc valves. New automobile float-feed type carburetor. Atwater-Kent ignition system. New compression relief reduces compression for easy starting. Price $345.00.

Super Elto
Lightweight

When folded, measures only 22"x11"x11"

ELTO *Lightweight*

Two cylinders, bore 2", stroke 1⅝", piston displacement 10.2 cubic inches, 3½ H. P. Weighs 38 pounds, hinging device permits instant folding to compact size, 22" long by 11" square. Atwater-Kent ignition, Elto centrifugal pump cooling. The smallest, most compact motor of its power, popular with sportsmen, yachtsmen, tourists, cottagers.

Price.................... $150.00

with the New ELECTRIC *Starting*

Quad

and

SENIOR *Speedster*

EVEN if you've spent years on the water — know all about boats and motors — a new, amazing experience awaits you — your first thrilling hour with a smart runabout and an electric starting Elto!

Just touch the starter switch—you're away—in a single breath-taking second your white wake lashes behind you! Like the touch of spur to a spirited horse! More quickly, more quietly, more positively than the start of your car. No grinding g-r-r-r-r of gears—not a noise but the instant whirr of your awakened motor, the song of the wind and tumbled waters.

ELTO *Quad* (Electric Starting)

(For other specifications see opposite page.)

A de luxe powerplant for fine runabouts up to 20 feet long, for cruisers up to 25 feet. Every moving part of motor excepting propeller entirely enclosed. Motor furnished complete with 6-volt storage battery, switch, cables, etc. Price $395.00

ELTO DIVISION
Outboard Motors Corporation
Ole Evinrude, *President*
MILWAUKEE, WIS., U. S. A.

All ELTO Dealers Also Sell the **FOLD-LIGHT** *"The World's Lightest Twin Outboard"*

OUTBOARD
MOTORS
CORPORATION

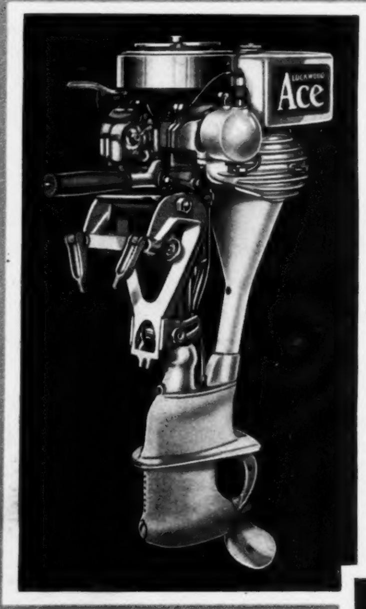
LOCKWOO

THE Lockwood Chief—with Electric Starting! For years the boati world has conceded B class leadership to the Chief for its power, it quietness, its handling ease and advanced mechanical excellence –

Now, with electric starting, lighting, generating, the Chief steps to ne dominance in its field! Now, the owner of even a fishing boat, sea skiff o small family runabout need only "flip the switch" — and foam away — in stantly! — entirely liberated from old-time starting methods and annoyance

With the electric starting Chief your boat acquires all the handling ease of runabouts costing thousands of dollars. All motor controls, the starting switch, choke, spark and steering wheel can be mounted in remote control. No need to go near your motor to start or stop or change the speed. Or, for ordinary service, simply leave the controls mounted on the motor.

Thousands of the new Electric Chiefs will b demanded by present Lockwood users. T others we offer this advice — see your Lock wood dealer early! Year after year there h has been a shortage of Lockwood moto This year, with electric starting, not eve widely expanded production will be able t meet the height-of-the-season demand.



The 1930 LOCKWOOD Ace

with Underwater Silencer

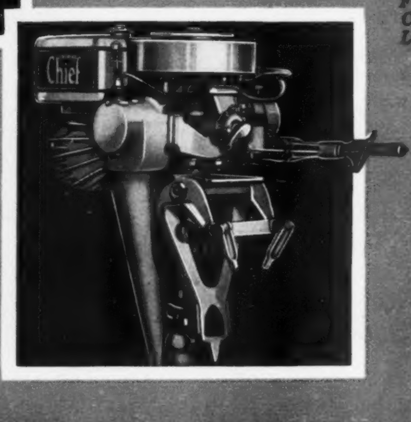
Developing 7 horsepower — weighing only 53 pounds – consistent winner of all class A championships — the Lock wood Ace satisfyingly fulfills the requirements of those wh demand flashing performance even from an outboard smal in size, weight and cost!

Now a new underwater exhaust silencer brings new quietne to this popular model. Noises and exhaust gases are alik dispelled beneath the surface of the water. Even at to speed the Ace runs with a soft hum scarcely audible at short distance. For starting ease this silencer embodies new feature — an automatic back-pressure cut-out. Bac pressure is entirely eliminated when the motor is bein started and the cut-out is instantly, automatically sealed a soon as the motor has been started.

For complete catalog describing The Elec Chief, the Silent Chief and the Ace, wri Lockwood Division, Outboard Motors Co poration, Dept. P., Milwaukee, Wis.

LOCKWOOD *Ace*

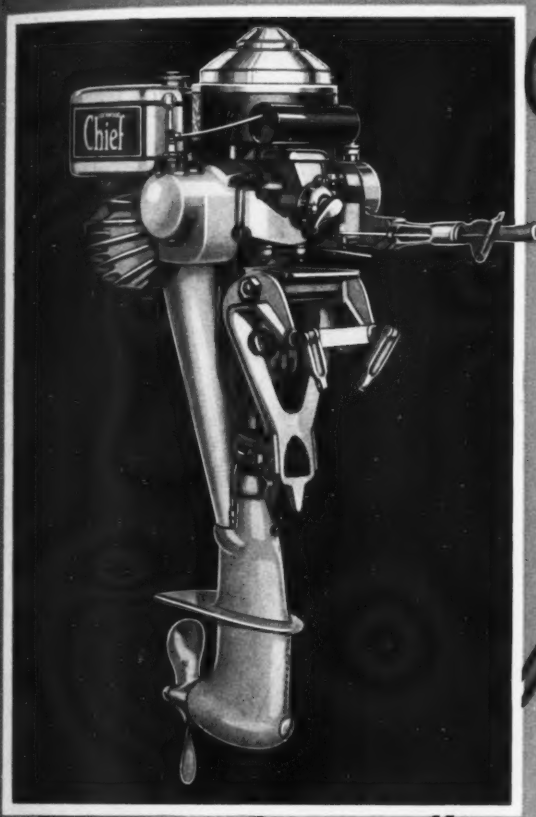
Class A, Develops 7 H. P., weighs only 53 pounds. Bore 2.1", stroke 2", piston displacement 13.85 cubic inches. Equipped with the Lockwood Pilot, "the unseen hand that takes hold when you let go." New underwater exhaust silencer insures quiet. Provided with automatic back-pressure cut-out for easy starting. Lockwood suction cooling system — no moving parts — assures adequate cooling. Price $170.00.



LOCKWOOD *Chie*

(With cord starter. Identical in every oth respect with the Electric Starting Ch Class B, develops 12 H. P. Bore 2⅜", str 2¼", piston displacement 19.92 cubic inch Weight, 75 pounds. Safe, easy steering w the Lockwood Pilot, "the unseen hand th takes hold when you let go." Exclusiv automatic lubrication system assures stant lubrication to main bearings and c necting rods. Underwater silencer elimina fumes, noise. Convenient gasoline gauge tank. Price $190.00.

with the New ELECTRIC *Starting* Chief



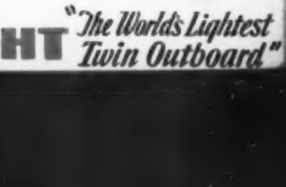
UTTERLY different from electric starting as you have known it! No heavy, cumbersome, mechanical attachments! No extra gears, shafts, springs! Just a single, compact, self-contained unit that replaces the flywheel, spins the motor at the touch of the starting switch and quickly recharges the battery as soon as the motor is started. Not a single moving part exposed! Mechanically so direct, so simple, so positive that you can depend on it for year after year of steady, carefree service.

The ELECTRIC STARTING *Chief*

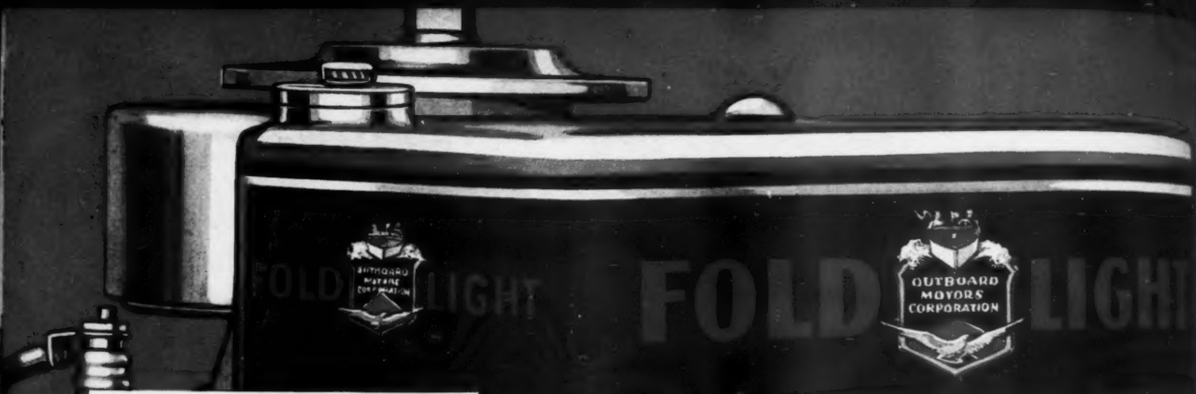
With Electric Starting, Generating, Lighting. For further specifications see Silent Chief on opposite page. Every moving part of motor excepting propeller entirely enclosed. Motor furnished complete with 6-volt storage battery, switch, cables, etc. Price $240.00, f. o. b. factory.

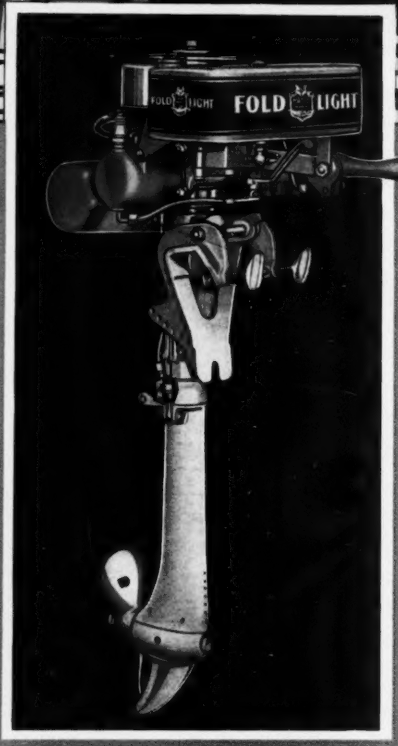
LOCKWOOD DIVISION

Outboard Motors Corporation
Ole Evinrude, *President*
Milwaukee, Wis.
U. S. A.



All LOCKWOOD Dealers Also Sell the **FOLD-LIGHT** *"The World's Lightest Twin Outboard"*





FRONT VIEW OF FOLD-LIGHT
Note Position of Gas Tank — Easy to Fill

Announcing FOLD-LIGH

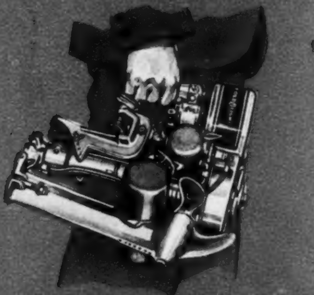
— world's lightest, smalle handiest Twin Outboa

FOLD-LIGHT revises all previous conceptions of o board motor compactness, handiness and spe power with light weight. Revolutionary is this rem able new motor — achieving new standards of p ability and convenience in new ways.

The gas tank is mounted on the front — out of the way w
the lower unit is folded between the twin silencers.

The motor head is cushioned in rubber, minimizing vib
tion and serving to hold the motor on any fixed course with
your touching the tiller handle.

New type throttle control operates both choke and thrott
A powerful water-proof magneto assures easy starting.



It folds — measures only 17″ x 11½″ x 11¼″

Weighs no more than a hearty picnic lunch, carries as easily and is always ready. To fold, simply unloosen two lock nuts and swing lower unit upward where a spring holds it securely in place. Tiller handle folds down to form a comfortable carrying handle.

Full 2¾ Horse Power Weighs only 29 Pounds

FOLD-LIGHT is powerful. One moment — while you are lowering its 29 pounds to the transom with almost no effort — you marvel at such lightness. Next moment you can't believe that such power and speed are possible. Truly, that's exactly what awaits you when the husky 2¾ horse power of FOLD-LIGHT goes to work on your boat.

To the sportsman, yachtsman, fisherman and cottager — to him and his entire family down to the youngsters — FOLD-LIGHT is supreme in its field. The price is $145.00 f. o. b. factory.

Outboard Motors Corporation
Ole Evinrude, President
Milwaukee, Wisconsin

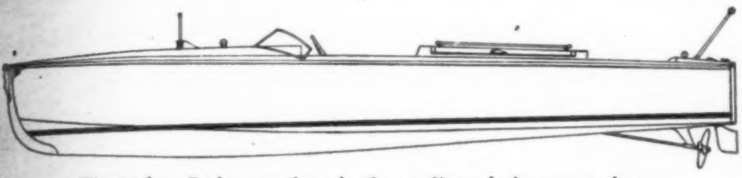
The FOLD-LIGHT is sold by every Outboard M Corporation Dealer — Evinrude, Elto and Lock

MASS PRODUCTION FOR BOATS

(*Continued from page* 107)

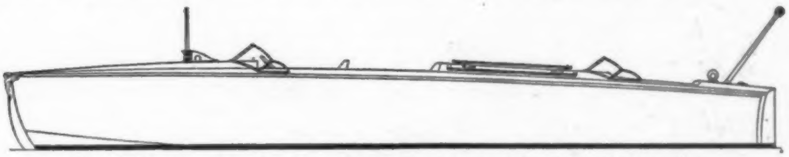
ever made by our company, a 45-foot twin screw cruiser with double cabin, two Lycoming motors of 300 horsepower each, commodious sleeping accommodations for eight people and a speed of 35 miles an hour.

The speeds quoted have been deliberately underestimated so that the purchaser of a Dodge boat can discover that his craft delivers, in honest miles, not only the speed claimed for it but, in most cases, considerably more. The motor boating public is fast becoming speed conscious and we believe it produces much greater happiness among owners to realize that their boats are capable of speeds in excess of those claimed for them than to suffer the disappointment of realizing that the claimed speeds are merely paper speeds unattainable in actual practice.



The 16-foot Dodge runabout is the smallest of the new series

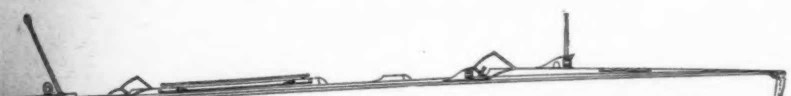
Naturally, having put such careful thought into the designing, building and unusual equipment of these boats, we are intensely proud of them and expect a very lively interest in them on the part of the motor boating public everywhere. Two of them, we know, have most unusual characteristics. The 16-foot runabout is an entirely new type of boat, considering its mahogany construction, its powerful motor, high speed and its astonishingly low price which is less than the cost of many outboard family boats of similar size.



The 25-foot runabout is also a fine type with a 125 h.p. Lycoming engine

The cruiser, in addition to its novel features of design, equipment and power, has an interesting history. It is from original designs by the late Howard E. Dodge, one of the founders of the Dodge Brothers Motor Car Company, adapted by Walter Leveau to modern requirements. Wealthy men are demanding greater and greater speed in their day cruisers and commuting boats. This is resulting in the appearance of a number of twin screw day cruisers this year. This new Dodge craft is not a day cruiser. It is a real home on the water, with sleeping and living accommodations for eight people but with a speed in excess of that of the average commuter.

In personnel, too, we feel that we have secured for this company an unusual and particularly efficient human equipment to carry out their extensive plan for the creation of a world-wide motor boating organization which will reach, within a short time, all civilized corners of the globe. The directors are Horace E. Dodge, president, J. Gilmore Fletcher, first vice-president and managing director, Hugh Dillman, Anna Dodge Dillman and William M. Horn, secretary and treasurer.



The 28-foot Dodge runabout to be powered with a 165 h.p. Lycoming engine

Factory management and production will be under the supervision of Mr. Horn with Walter Leveau as chief of the designing staff. Mr. Horn is extremely well known and popular in the motor boat world. He has been with the Dodge organization almost since its inception in 1924 and has had a vast experience with boats of all types, especially those with high powered engines. He has driven Dodge boats in countless races and drove with my sister, Delphine, and with me, when we won the Detroit 150 mile sweepstakes, the President's Cup and other famous trophies in Dodge boats. As factory superintendent we shall soon announce the employment of one of the most renowned boat builders in the industry.

The director of sales and distribution, located at the New York national headquarters, is Kenneth M. Smith, who, for two years prior to entering the Dodge Company, was president and director of the internationally known Gould Storage Battery Company, Inc., with which he had been connected in various capacities from sales manager to president since 1919. During the War, Mr. Smith served as executive secretary, at Washington, to William C. Potter, the national director of Aircraft Production and now president of the Guaranty Trust Company of New York.

L. S. Devos is assistant director of sales, coming to the Dodge Company from the Chris Smith & Sons Boat Company, of which he was assistant general sales manager. Previously he had been special regional representative of the Chrysler Corporation and special representative and assistant district manager for the Oakland Motor Car Company at New York City. During the War Mr. Devos was connected with the U. S. Air Service in France in the Inspector General's Department, Supply Division.

The New York district manager of the Dodge Company is F. F. Schryver, whose experience prior to coming with our company consisted of fifteen years of commercial banking with the Chatham Phoenix and the Public National Bank of New York City. Mr. Schryver was one of the first 50,000 American soldiers to get to France with the A. E. F. He was with the 22nd Engineers under General Cornelius Vanderbilt.

The New England territory is under the jurisdiction of E. Earl Lothrop, who recently joined the Dodge organization, coming directly from Skyways, Ltd., of Toronto, distributors in Canada for airplanes, boats and motor cars. Mr. Lothrop was vice president and managing director of Skyways, Ltd.

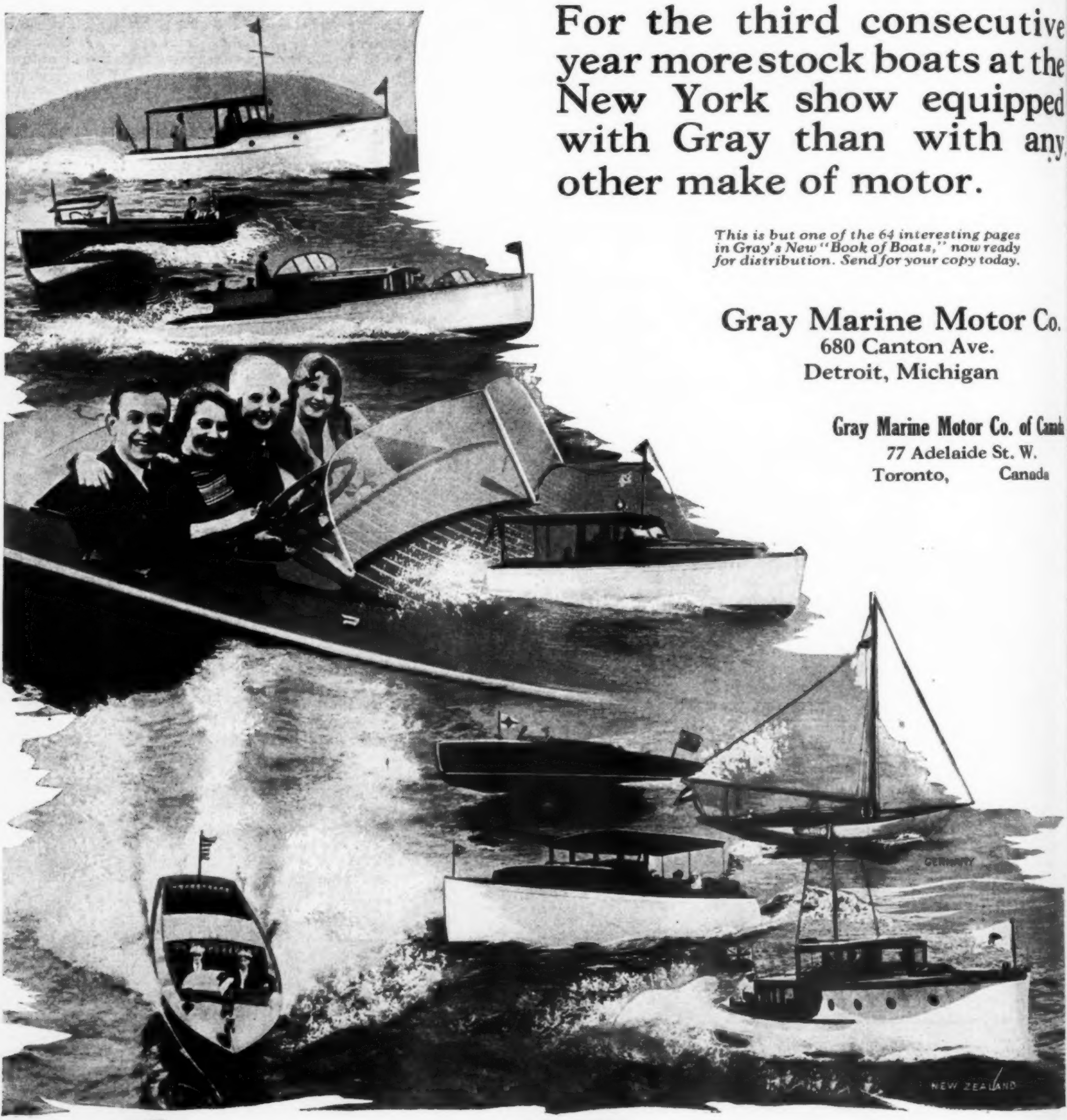
Another member of our national selling force is George Lewis Reiss, recently connected with the Plymouth Motor Car Company and formerly vice president and general sales manager of Charles E. Reiss and Co., New York metropolitan distributors for the Hupp Motor Car Company.

William T. Andrews, a popular member of the Newport colony, who has had much experience in the sale and use of Dodge boats, is a member of the selling staff at national sales headquarters. He was formerly connected with the Fokker Airplane Corp., and has had considerable experience in the selling of Sea Sleds.

Within a short time the new Dodge organization will embark upon extensive experiments leading to the manufacture of metal motor boats. This is a development that many of the wisest minds in the motor boat world have been predicting for many years. Up to now no company has cared to undergo the tremendous expense and the exhaustive research necessary for progress in this development. It seems inevitable that sooner or later motor boats will have all-steel bodies containing the high factors of safety, practicality, durability and economy of money and time in manufacture and upkeep

(*Continued on page* 184)

All Over the Show



For the third consecutive year more stock boats at the New York show equipped with Gray than with any other make of motor.

This is but one of the 64 interesting pages in Gray's New "Book of Boats," now ready for distribution. Send for your copy today.

Gray Marine Motor Co.
680 Canton Ave.
Detroit, Michigan

Gray Marine Motor Co. of Cana
77 Adelaide St. W.
Toronto, Canada

GRAY MOTORS

All Over the World

A complete line of 20 Great Gray Motors for 1930--A motor for every Boat (5 to 200 h. p.)

Sweeping Improvements.
Eight Great New Units.
The New Gray Vee Drive.
The New Twin Gray Eights.

This is but one of the 64 interesting pages in Gray's New "Book of Boats", now ready for distribution. Send for your copy today.

Gray Marine Motor Co.
680 Canton Ave. Detroit, Mich.

THE GRAY VEE DRIVE
Being Presented for the First Time at the Show

GRAY MOTORS

AMERICAN MOTOR BOAT RECORDS

(*Continued from page* 42)

MILE TRIALS, NAUTICAL MILES

CLASS B, DIVISION I

Baby Brontosaurus II, driven by Bill Lyon, at Newport Beach, Calif., Oct. 6-7, 1929. Built by Crandall Boat Co. Johnson 16 engine. Speed 36.185 nautical m.p.h.; 41.613 statute m.p.h.

CLASS B, DIVISION II

Salome, driven by A. G. Martin, at Newport Beach, Calif., Oct. 6-7, 1929. Built by F. V. Pierce. Johnson 16 engine. Speed 36.063 nautical m.p.h.; 41.472 statute m.p.h.

CLASS C, DIVISION I

Bossert Pirate, owned by Walter Peterssen, at Albany, N. Y., July 5, 1929. Built by Bossert. Evinrude engine. Speed 34.05 nautical m.p.h.; 39.15 statute m.p.h.

CLASS C, DIVISION II

Black Maria V, driven by Al Thomson, at Newport Beach, Calif., Oct. 6-7, 1929. Built by Al Thomson. Evinrude C engine. Speed 37.058 nautical m.p.h.; 42.617 statute m.p.h.

CLASS D, DIVISION I

Big Ben, owned by Harold Chapman, at Albany, New York, July 5, 1929. Built by Hallock. Johnson engine. Speed 38.09 nautical m.p.h.; 43.80 statute m.p.h.

CLASS D, DIVISION II

Blue Streak, driven by H. G. Ferguson, at Newport Beach, Calif., Oct. 6-7, 1929. Built by Lake Elsinore Boat Works. Johnson 32 engine. Speed 41.503 nautical m.p.h.; 47.728 statute m.p.h.

FIVE MILES

CLASS A, DIVISION

Strange Interlude, owned by James Sullivan, at Boston, Mass., Oct. 5, 1929. Built by Porteus. Lockwood engine. Speed 23.29 m.p.h.

CLASS A, DIVISION II

B2, driven by A. E. Sutherland at Worcester, Mass., May 30, 1929. Built by Herbst. Lockwood engine. Speed 25.50 m.p.h. (4)

CLASS B, DIVISION I

Sweet 16, driven by N. C. Blanchard, at Cross Lake, La., August 4, 1929. Built by Ashbridge Boat Works. Johnson engine. Speed 36.95 m.p.h.

MADE UNDER NEW 1930 RULES

Flying Cloud II, driven by Harry Arnold at Lake Merritt, Oakland, Calif., Jan. 1, 1930. Built by Sulmock. Johnson engine. Speed 36.735 m.p.h.

CLASS B, DIVISION II

Ohkay, driven by H. S. Ferguson, at Peoria, Ill., Oct. 15, 1929. Built by Lake Elsinore Boat Works. Johnson engine. Speed 40.43 m.p.h.

CLASS C, DIVISION I

Vagabond, driven by B. A. Wheeler, Salton Sea, Calif., Dec. 14-15, 1929. Built by Elsinore. Evinrude engine. Speed 41.09 m.p.h.

CLASS C, DIVISION II

Blue Streak, driven by H. G. Ferguson, Salton Sea, Calif., Dec. 14-15, 1929. Built by Elsinore: Evinrude engine. Speed 42.35 m.p.h.

MADE UNDER NEW 1930 RULES

Blue Streak, driven by H. G. Ferguson, at Lake Merritt, Oakland, Calif., Jan. 1, 1930. Built by Elsinore. Evinrde engine. Speed 39.13 m.p.h.

CLASS D, DIVISION I

Peggy Lee, driven by Floyd Hodges at Cross Lake, La., August 4, 1929. Built by Ashbridge Boat Works. Johnson engine. Speed 41.06 m.p.h.

MADE UNDER NEW 1930 RULES

Lazy, driven by Francis Wilber, at Lake Merritt, Oakland, Calif., Jan. 1, 1930. Built by Wilbur. Johnson engine. Speed 39.824 m.p.h.

CLASS D, DIVISION II

Blue Streak, driven by H. G. Ferguson, Salton Sea, Calif., Dec. 14-15, 1929. Built by Elsinore. Johnson engine. Speed 45.34 m.p.h.

CLASS E, DIVISION I

Thoroughbred Baby, owned by Col. S. Tooey, at Boston, Mass., October 5, 1929. Fay & Bowen boat, Johnson engine. Speed 34.82 m.p.h.

CLASS E, DIVISION II

Ludington, driven by J. Dunnell, at Worcester, Mass., May 30, 1929. Ludington boat, Johnson engine. Speed 40.36 m.p.h. (5)

SIX MILES

CLASS B, DIVISION I

Crandall Comet, driven by Charles Adams, at Newport Beach, Calif., Oct. 27, 1929. Built by Crandall Boat Co. Johnson engine. Speed 34.269 m.p.h.

CLASS B, DIVISION II

Blue Streak, driven by H. G. Ferguson at Elsinor, Calif., July 28, 1929. Built by Lake Elsinore Boat Works. Johnson engine. Speed 40.54 m.p.h.

CLASS C, DIVISION I

Blue Streak IV, driven by Chuck Hall, Lake Elsinore, Calif., July 28, 1929. Built by Lake Elsinore Boat Works. Johnson engine. Speed 37.75 m.p.h.

CLASS C, DIVISION II

Blue Streak IV, driven by H. G. Ferguson at Lake Elsinore, Calif., July 28, 1929. Built by Lake Elsinore Boat Works. Johnson engine. Speed 40.63 m.p.h.

CLASS D, DIVISION II

Blue Streak, driven by H. G. Ferguson, at Newport Beach, Calif., Oct. 27, 1929. Built by Lake Elsinore Boat Wks Johnson engine. Speed 43.584 m.p.h.

CLASS E, DIVISION I

Ceestepper, driven by L. E. Preston at Red Bank, N. J., August 25, 1929. Built by Penn Yan Boat Works. Johnson engine. Speed 40.227 m.p.h.

TEN MILES

CLASS B, DIVISION I

MADE UNDER NEW 1930 RULES

Flying Cloud II, driven by Harry Arnold, at Lake Merritt, Oakland, Calif., Jan. 1, 1930. Built by Sulmock. Johnson engine. Speed 36.182 m.p.h.

CLASS B, DIVISION II

Crandall Comet, driven by Charles Holt, at Salton Sea, Calif., Dec. 14-15, 1929. Built by Crandall Boat Co. Johnson engine. Speed 38.83 m.p.h.

CLASS C, DIVISION I

Miss Genn III, owned by Robson Cupplls, at White Rock Lake, Dallas, Texas, Sept. 8, 1929. Built by R. Allen Smith. Evinrude engine. Speed 40.089 m.p.h.

CLASS C, DIVISION II

Blue Streak II, owned by L. Baughman, driven by H. G. Ferguson, at San Diego, Calif., Dec. 16, 1928. Built by Holt. Evinrude engine. Speed 38.59 m.p.h. (B)

CLASS D, DIVISION I

I'm Alone, owned by E. Widegren, Oyster Bay, N. Y., Sept. 29, 1929. Built by D. N. Kelley Co. Johnson motor. Speed 47.36 m.p.h.

CLASS D, DIVISION II

Blue Streak IV, owned by Dr. Baughman, at Lake Elsinore, Cal. Sept. 22, 1929. Built by Lake Elsinore Boat Works, Johnson engine. Speed 44.12 m.p.h.

CLASS E, DIVISION II

Miss Mystery, owned by L. F. Davids, at Boston, Mass. Oct. 5, 1929. Built by Fay & Bowen, Johnson engine. Speed 40.36 m.p.h.

FIFTEEN MILES

CLASS B, DIVISION I

Crandall Comet, driven by Chas. Adams at Newport Beach, Cal. Oct. 27, 1929. Built by Crandall Boat Co. Johnson engine. Speed 37,383 m.p.h.

CLASS B, DIVISION II

Blue Streak, driven by H. G. Ferguson at Lake Elsinore, California, July 28, 1929. Built by Lake Elsinore Boat Works, Johnson engine. Speed 40.40 m.p.h.

CLASS C, DIVISION I

Vagabond, driven by B. A. Wheeler at Newport Beach, Cal. Oct. 27, 1929. Built by Lake Elsinore Boat Works. Evinrude engine. Speed 35.785 m.p.h.

CLASS C, DIVISION II

Blue Streak IV, driven by H. G. Ferguson, at Lake Elsinore, Cal., July 28, 1929. Built by Lake Elsinore Boat Works, Johnson engine. Speed 40.31 m.p.h.

CLASS D, DIVISION II

Blue Streak, driven by H. G. Ferguson, at Salton Sea, Calif., Dec. 14-15, 1929. Built by Lake Elsinore Boat Works. Johnson engine. Speed 44.92 m.p.h.

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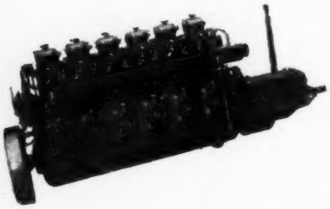

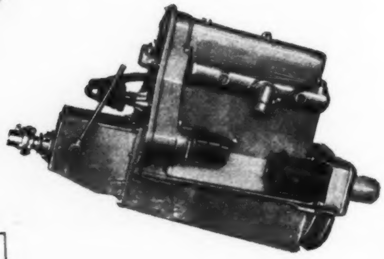

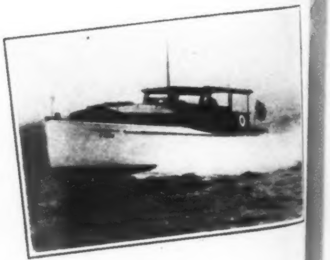

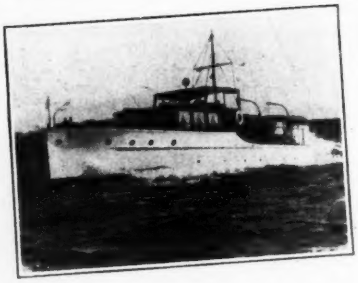

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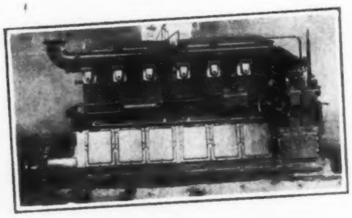
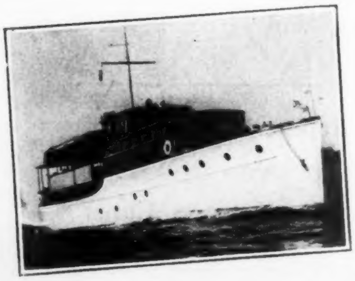
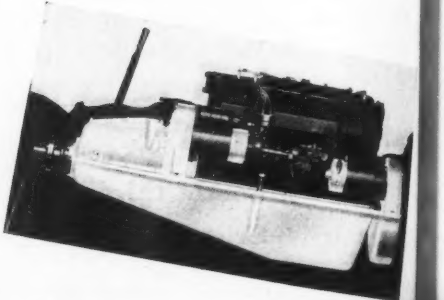
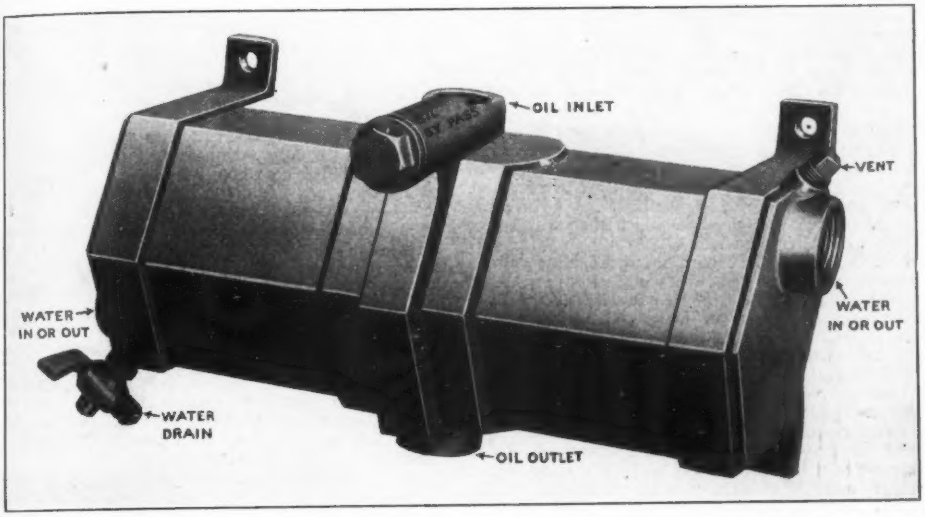
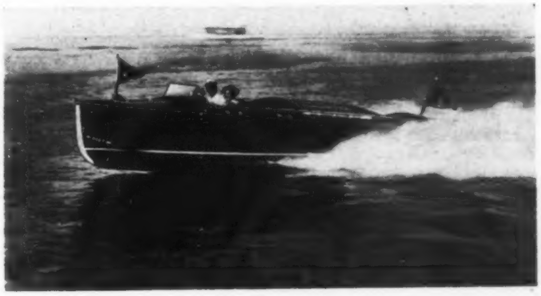






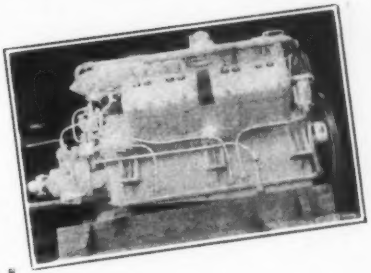


STUDY the following list of nationally known boats and engines—in the marine field, there are more Groco Oil Coolers sold than all others combined.



BOATS—

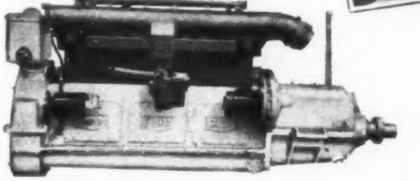
Chris Craft, Dawn, Dunphy, Chance, Matthews, Elco, Richardson, New Veedette, Dart, Hackercraft, Sea Lyon, Dodge, Corsair, Hadley Planes, Wheeler, Banfield, Ruddock, Johnson Sea Skiffs, Fleetwing.



ENGINES—

Gray, Chrysler, Buda, Peerless, Universal, Buffalo, Niagara, Fay & Bowen, Chris Craft, Kermath, Stearns, Bessemer, Standard, Hill, Treiber.

And in the industrial field, Groco Oil Coolers are being used to cool cutting oils, reduction gears, gas and oil engines, high speed production machinery of all kinds.



GROCO

OIL COOLERS

WILL THE YACHT CLUB SURVIVE?

(*Continued from page* 155)

all make for more or less uneven service season by season.

Yet all of us can think of many yacht clubs which have made themselves permanent places in the sport, whose longevity cannot be threatened by any marine service station development anywhere. Those clubs make activity in the sport and represent ideas, and ideals in many ways. The Columbia Yacht Club of New York—situated on the Hudson which is bad water for driftwood and has been pronounced unfit for pleasure boating by many although it isn't by any means—has been a strong social centre, a place where every yachtsman likes to go whether he is a member or not. Its long association with the beloved Gold Challenge Cup of the American Power Boat Association, as original donor and mainstay of competition for it in many lagging seasons, has given it a prestige which no yard service would ever bring to a club anywhere.

The great Detroit Yacht Club, with its speed king and its international regatta, continues to hold its place in the rank of leading yachts the world around, despite the loss of the Gold Cup to the East and the failure of many gallant challengers to bring it back to Belle Isle. And there is the Chicago Yacht Club with its $3,000,000 building program for a clubhouse such as the yacht club world has never yet seen. There is the Ida Lewis Yacht Club of Newport, child of the Naragansett Bay Regatta Association, which has put motor boating on the map in one of the finest bodies of water in the country and chrystallized sentiment for the sport throughout the hinterland. There is the Miles River Yacht Club of St. Michaels, Maryland, which has made itself a national reputation with its annual regatta and the participation of its members in other events in other parts of the country.

There is the Colonial Yacht Club of New York, which for some years labored through a dormant period, came to life under the leadership of Jules Heilner, now its silver star Commodore, by a program of good fellowship extended to other yacht clubs and the initiation of a cruiser race, the Bear Mountain Handicap, which had for its major premise, not competition so much as entertainment. And on the other hand the New York Yacht Club has remained aloof from participation in interclub sport save in the sail-boat classes, but its annual cruise is one of the great yachting events of every season.

In the winter months in the South, there is the Miami Beach Yacht Club where motor boating history is made each year. And the Palm Beach Yacht Club, and other motor boating organizations in Florida and along the Gulf Coast are making things happen, and about them the sport is gathering. Everybody wants to be a member of such clubs—clubs which do something—although each club seems to have its own means of doing it and represents a slightly different procedure in the process of keeping alive. And the list is a long, growing one.

But what of the outboards? This class requires housing and other facilities ashore which up to now few yacht clubs have provided, although outboard boats are found in almost every fleet. Will the service stations get them? If they do, the patrons of each service station will form themselves into a club to act for them in the sport. And why not? The tendency is for outboard clubs to be formed and for the proper housing facilities to come into being for them and through them, one way or another. Not yet have many yacht clubs provided outboard accommodations and bid for outboard members. The wide separation between the types of motor boats usually found in a yacht club fleet—and outboards, seems to preclude this. But these outboard clubs, which, in last analysis are new yacht clubs—pleasure boat clubs—display remarkable virility. We would expect that of them, somehow.

These outboard clubs, however, are comparable to canoe clubs in a sense. They are equipped exclusively for outboard service. Their membership is made up of young people for the most part, outboarding having its strongest appeal to youth. And the remarkable popularity of outboard racing with the whole motor boating sport and the general public is a guarantee of activity in this sport as long as youngsters love speed and thrill—and there is room enough on our waterways for them to compete. And the trade will support them with new models, service stations and facilities.

There must always be a trade, and a sport wing to motor boating. In past years the trade was too limited to furnish water front facilities. There were hardly enough boats anywhere to justify capital investment for their service. Sportsmen—boat owners—got together and did it for themselves, or collectively employed workmen to do it. Now the trade is taking over this service—which is a salutary move. Now in future years the yacht club can devote itself to the best interests of itself and its members in a wider way. But it must be done —not talked about and postponed.

Let us all get behind our yacht club in 1930 as we never did before. It's up to us to make things happen and to devote ourselves to the preservation of our particular clubs in the period in which they must make good on a different basis than formerly. They are the sport end of things and it is up to us members to make our own clubs the strong social and activity centers in our localities, so that the progress will not only be material in the trade, but alluring to newcomers who desire the full enjoyment that motor boating affords—the fascination of water cruising and the fellowship and good will that can only be had in yacht club membership.

LAND OR SEA—WHICH?

(*Continued from page* 154)

cushions. Nautical terms were quickly picked up by the whole family. They no longer said "upstairs, downstairs, right, left, front, back, kitchen," etc. The proudly referred to "on deck, below, starboard, port, forward, aft, galley," etc., and the ten year old son bought an old fashioned butter churn from a junk man for two dollars. He caulked and painted it, rigged a square sail, made a paddle out of an old broken oar, and thus converted a useless butter churn into a full rigged ship which he named Barnacle in large letters on both sides. This tub was always carried on the larger craft and made many voyages in all kinds of weather, the owner becoming remarkably skilful in managing his peculiar ship, like Ben Gunn of Treasure Island in his coracle. His only passenger was his faithful dog.

A real voyage was now in order. With their new confidence the family wanted to do in a boat what they had done in the automobile and see if they could get away with it. They decided to make a week-end cruise to New Haven. Aided and abetted by his yachting friend, Mr. Walpole purchased some maps of the coast which his friend called charts, and drew lines between lighthouses, buoys, etc., all the way from Rye to New Haven. This was called "Plotting the Course." By means of a course protractor the compass direction of each line was found and marked on the line so that the skipper would know how to steer. The length of each line was compared to the scale on the chart and the number of miles noted so that the skipper could calculate from the speed of his boat the approximate time he should arrive at each point. This information is useful at all times, but is quite essential in a fog or when the visibility is poor. Contrary to an automobile in varying traffic conditions, a boat will arrive at a given point within a surprisingly few minutes of the calculated time. While the skipper was navigating on paper, his practical wife was stocking the boat with pots, pans, dishes, knives, forks, spoons, an enormous tin bread box, canned food, etc, etc. She required no instructions for this. This was her department, and she simply fitted out another little home on a smaller scale. Many of the best looking articles were purchased at the 5 & 10c Emporium. Although Mrs. Walpole had no previous yachting experience, she did know her onions.

Bright and early on a Saturday morning the Walpoles started off on their maiden cruise. The weather was perfect, the sunshine made the water sparkle, the fresh salt air was like a tonic, there was no dust, no speed maniacs taking chances on blind turns, no stop streets to be ignored by everybody except a few careful drivers like the Walpoles, and no traffic cops to bawl out these same careful drivers. As per plotted course the happy skipper steered due East down the middle of the Sound. He noticed, however, that they seemed to be getting closer to the Connecticut shore instead of following the line he had marked on the chart. This was serious. Mr. Walpole immediately checked up and everything seemed according to Hoyle except that the boat was certainly not following the line on the chart. At the end of an hour there was a light house and a harbor dead ahead. This surely was not on the programme. Walpole was nothing but a landlubber afloat, but he had ordinary common sense and realized that he needed technicle advice before tempting providence any further. He entered the harbor, hailed a yacht riding at anchor, and asked where he was at and how come.

The hailed yachtsman seemed a different type from the speed crazed automobilists. His only aim in life did not seem to get somewhere else in the shortest possible time. On the contrary, he seemed to feel that a fellow yachtsman in distress should have first call on his time. He stated that they were in Stamford Harbor and that Walpole could not be there if he had

(*Continued on page* 194)

THE LATEST in INSTRUMENT PANELS

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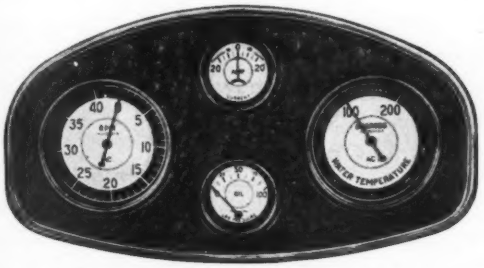
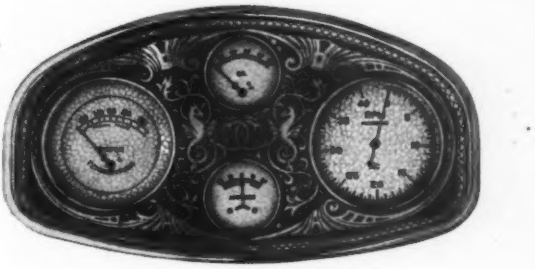


Black Face Style—Combination X-5... made of pattern brass and richly lacquered black. The outer rim is chrome plated, as are the bezels of the instruments. The faces of the instruments are in silver and black; the pointer tips being lacquered red. All instruments under glass with indirect illumination. Size 11¼ inches wide, 6⅜ inches long and 3 inches deep.



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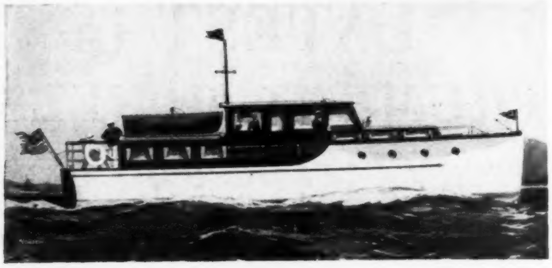
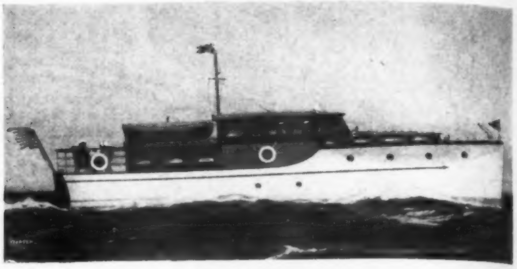


40—PILOT



45—NAVIGATOR

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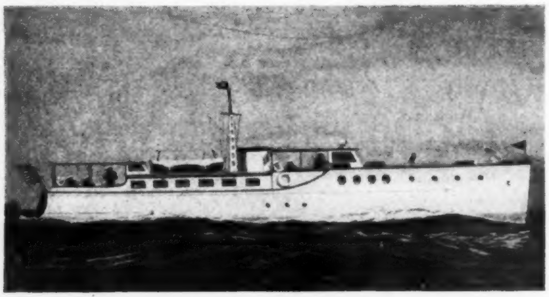
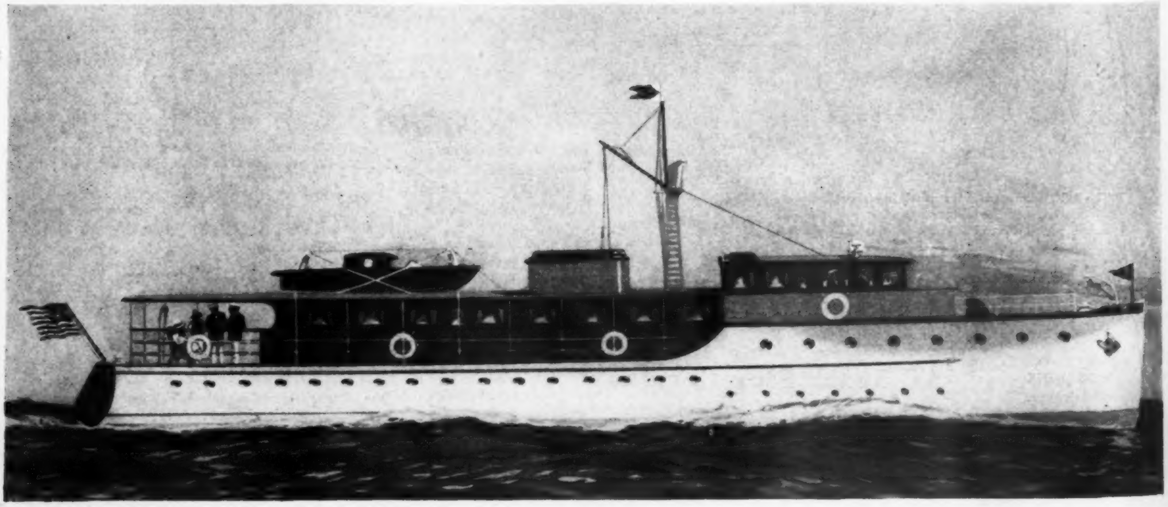
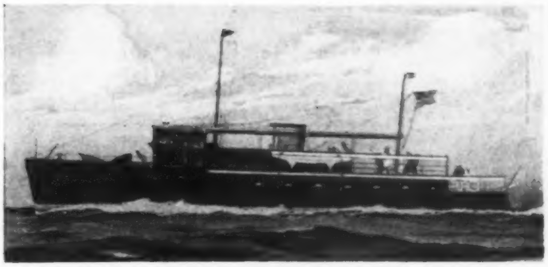


65—DESTROYER

Humphrey's 111-Foot Twin-Screw Diesel-powered cruising house-boat built for Senor Alfred Cernades of Buenos Ayres, Argentina. Speed 12 miles per hour



55—PRIVATEER



60—EXPLORER

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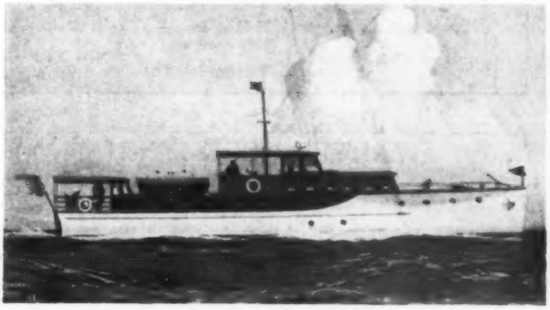
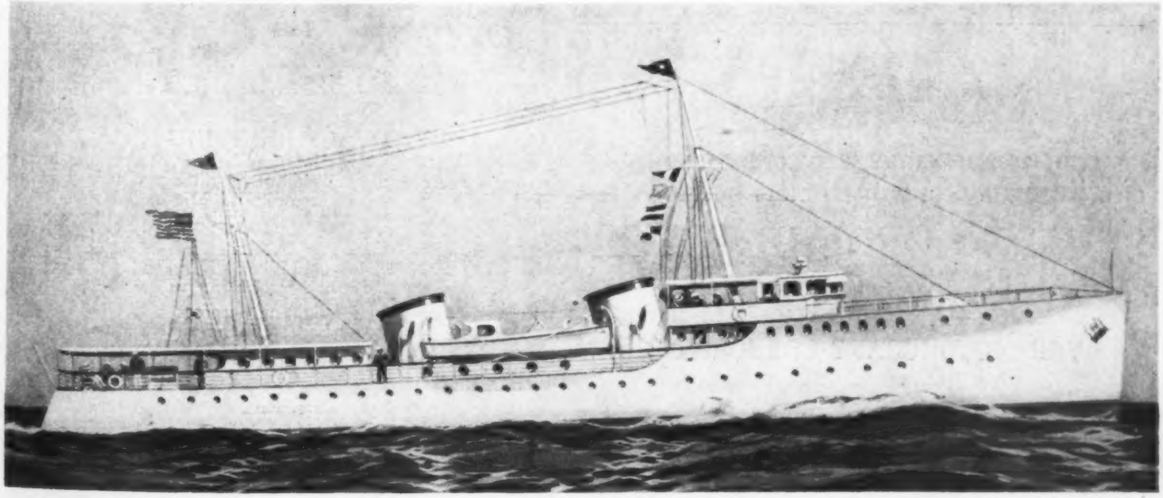


70—DISCOVERER

Humphreys 138-Foot Express Cruiser powered with two 1,000-H.P. Burnmeister & Wain Diesels giving a speed of 26 miles per hour



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4239 St. Charles Avenue, New Orleans, Louisiana
Sail and power yachts. Houseboats and commercial vessels. Surveys made in all Gulf Ports.
I have a large number of yachts of every description for sale, and some for charter. Stability and free board calculations. Cable address: "Walkeen."

JOHN H. WELLS, INC.
NAVAL ARCHITECTS
BROKERAGE **Service That's Different** **SUPERVISION**
Telephone: Murray Hill 3126-7
11 EAST 44th STREET **NEW YORK**

MOTORCRAFT
OUR WORKMANSHIP IS SECOND TO NONE
OUR PATENTED CONSTRUCTION IS SUPERIOR FOR
SPEED and ROUGH WATER
A Catalogue convincingly tells the story.
May we send you one?
DYER MOTORCRAFT CORPORATION
EAST GREENWICH, RHODE ISLAND
The World's Best Built Boat.

YARD AND SHOP

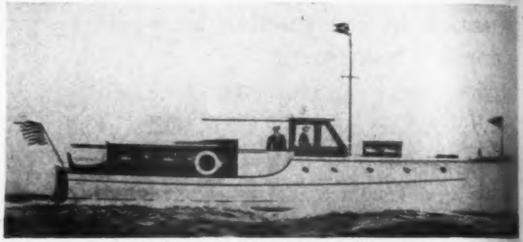
ROUND THE WORLD ALONE

Alain Gerbault, whose arrival at Havre in Firegrest after a lone voyage round the world, attracted much attention at the end of last July, has lost no time in publishing an account of his experiences. His adventures on the voyage from Cannes to New York, 1923, were described in a volume entitled "The Fight of the Firecrest," and this latest book, "In Quest of the Sun," deals with the continuation of the cruise round the globe in the years 1924 to 1929, via Panama, the South Sea Islands, New Guinea, Cape Town and various lonely Atlantic cable stations.

The author, who, incidentally, is a tennis and football player of no mean repute, made the voyage entirely alone (except for rats and cockroaches) in an eight-ton English-built cutter drawing 6 feet of water with a four-ton lead keel. We are told little else about the boat, which seems to have been very seaworthy for her size. Alain Gerbault scorned the use of a pilot at practically all of the out-of-the-way harbors which he visited, and did not even have an auxiliary engine to help him into port. A Berthon canvas folding boat was carried for reaching the shore, but he frequently risked the sharks and swam.

Half of the book deals with the voyage across the Pacific Ocean, as it was the author's aim to get away from civilization to sunny climes peopled by communities untouched so far as possible by the hand of the white man, and he makes many caustic comments on the way white men pass their existence in the tropics, as well as the manner in which they direct the lives of the natives of Polynesia.

Entertainingly written and illustrated with a number of photographs and maps, it records an epic of the sea comparable only with the accounts of the world voyages of Slocum, Voss and Muhlhauser.



A new stock 42-footer designed by Millard, Brewster and Chambers and suited to either gasoline or diesel power

D. R. Y. L. HOLDS ANNUAL BANQUET

On Thursday evening, December 12, the Delaware River Yachtsmen's League met at its 15th Annual Banquet at McCallister's in Philadelphia. Members of the fifteen clubs which compose the league were present and, following a sumptuous dinner, addresses were delivered by a number of prominent persons, including: Hon. F. W. Donnelly, Mayor of Trenton; Hon. J. H. Moore, president American Deeper Waterways Association; Hon. H. G. Hoffman, Congressman, 1st District of New Jersey; Hon. C. A. Wolverton, Congressman, 3rd District of New Jersey; Col. G. B. Pillsbury, District Engineer, U. S. A.; F. R. Still, president A. P. B. A.; C A Mayer, president Delaware River Yachtsmen's League; Wm E. Bernard, president Lehigh Coal & Navigation Co.; C. F. Chapman, editor of MoToR BoatinG; Elisha Webb, Jr., member Captains' and Vessel Owners' Association; and H. A. Jackson, chairman, Aids to Navigation.

A COMPACT LIGHTING PLANT

A new small lighting plant and battery charger has been put on the market by the Malleable Iron Fittings Company of Branford, Conn., known as the Branford Midget, which is sure to find favor among owners of small cruisers and sail boats. By the use of this plant, the advantages of electricity are available to small sail boats unequipped with engines. Auxiliaries and motor boats can employ it to keep their batteries charged and enjoy the use of fans and ventilating systems, besides having all the electricity they want for lighting purposes.

The Branford Midget is made in six and twelve-volt sizes and is used with one storage battery of corresponding size. Its weight is under fifty pounds so that it is conveniently portable and very handy to install. The six-volt outfit is capable of generating 18 to 20 amperes and the twelve-volt plant 12 to 15 amperes, ample capacity for all small-boat requirements. E. J. Willis Company, 85 Chambers Street, are the New York distributors.

(*Continued on page* 488)

MIAMI BEACH

The Yachtsman's Capital

WANT a real vacation this winter? Then come to Miami Beach, the winter capital for yachtsmen. Here in the semi-tropics, where June weather reigns the year around, outdoor sports are the spirit of the day. There's Boating — Bathing — Fishing — Golf — Polo — Tennis — Motoring and other diversions.

Miami Beach, with its unsurpassed yachting facilities, its many sport attractions, its irreproachable hotels, economical apartments and cottages, ensures you a never-to-be forgotten vacation. You will especially want to be here for the International Speed Boat Races, March 25th and 26th.

For descriptive literature and hotel accommodations address: Chamber of Commerce, Miami Beach, Florida

LUX

Standard Equipment at the MOTOR BOAT SHOW

DAWN—WHEELER—HUBERT JOHNSON—CHRIS-CRAFT—LUDERS—DART—CONSOLIDATED—BANFIELD

VARIED designs and varied equipment mark the different boats at the Motor Boat Show. One point of similarity is found in fire-protection apparatus. With eight of the boat builders exhibiting, Lux is standard—Banfield, Consolidated, Dart, Luders, Chris-Craft, Hubert Johnson, Wheeler, and Dawn.

Prospective buyers of boats know the value of an adequate system for fire-protection; and the builders have given them Lux.

When fire threatens, a pull on the Lux Control Handle releases a blanket of Lux (carbon dioxide) gas in the danger area. Any fire is completely extinguished in less than ten seconds. And, as Lux gas is dry and non-poisonous, no harm is done to the engines, the furnishings, or the passengers.

Patrons of the Motor Boat Show have one question on fire-protection—"Can a fire be put out quickly and completely?" Boat builders with Lux as standard equipment can answer "Yes."

Walter Kidde & Company, Inc.
140 Cedar Street
New York

LUX
FIRE EXTINGUISHING SYSTEM

LABELED BY UNDERWRITERS' LABORATORIES

BOAT PRODUCTION INCREASED

(*Continued from page* 91)

the 32 had to go by the board.

The second big change was the duplication of the five popular models of the 38 in the 46-foot hull. As above noted, the equipment used in the 46 is virtually identical with that of the 38, the difference being in the way of larger compartments for the 46 and improvements in dress and finish. Another difference is in the inclusion of crew's quarters in the larger hulls. Experience has already proved that this move of duplicating the 38 models in the 46 hull was a smart one, business in the larger hulls having increased more than two hundred per cent over last year.

As previously announced by the company the line has been increased this year by two models—the 38 and the 46 double-cabin sport cruisers. Both of these are a bit finer than Matthews has hitherto attempted, being a response to the demand of many customers for something approximating custom-built jobs. Hence many things have been done in their interiors which are departures from standard practice, while all the exterior hardware is chromium plated, making the boats bright and shiny in every particular. Numerous features have been included to give the appearance of a specially designed and specially built boat.

IMPROVEMENTS IN CRUISING CRAFT

(*Continued from page* 99)

lavatory has been placed aft on the port side where it is readily accessible both from cabin and from bridge. The after cabin arrangement has also been altered placing hanging locker and toilet room at the after end and gaining the space for the enlarged deck house by allowing the berths to project under the seats on the bridge.

The power plant, as before, is the Elco Model F-62 6-cylinder 125 h. p. engine producing a speed of 15 miles per hour. Fuel tanks, as in the Cruisette, are arranged to completely eliminate fire hazard.

The external appearance of the 1930 42-foot Cruiser is practically identical with that of boats built during the past two years. Experience has shown that there was little improvement to be made in the deck arrangement, appearance, or power plant of this boat. The interior, however, is different. In the after cabin a shower bath has been added to the toilet facilities formerly provided.

The arrangement of the forward end of the boat has been radically changed and is now standardized in the type formerly offered optionally at extra cost. In the bow of the boat is a comfortable double stateroom having two permanent high berths, a dresser, hanging locker and every convenience. A door separates this from the rest of the boat.

The Elco 50-foot double screw motor yacht will again be built in practically the same form as it was during the past two seasons. It has been so successful and satisfactory from every point of view that it was considered inadvisable to make any changes. An important addition for the comfort of the owner and his guests has been made, however, in the form of a very large and deep lazy seat extending along the starboard side of the after cabin trunk. This was fitted on special order on two 50-footers during the past season and proved to be such an attractive feature that it has been incorporated in the standard boat for 1930.

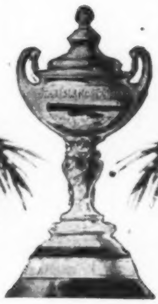
SEA-GOING BICYCLES

A novel and interesting device has been put on the market in the form of a boat propelled, ridden and steered in much the same manner as a bicycle. The Bike Boat, as it is called, is manufactured by the Peugeot Automobile Company, well known French automobile manufacturers, with representatives in the General Motors Building in New York City.

The Bike Boat consists of two shells of specially prepared wood which support a framework similar to the mechanism of a bicycle. The motion of the pedals, however, instead of being transmitted to wheels, is delivered to a three-bladed propeller which is capable of pushing the boat about eight miles an hour with little exertion by the operator. Steering is accomplished by handle bars connected to a rudder which is attached to one of the floats.

The craft is 14 feet in length by 3½ feet wide, weighs but 1 pounds and is claimed to be both unsubmersible and non-capsizable, being built according to the general plan of one of the catamarans as used by life guards on the beaches. One of the Bike Boats has already set a mark of eight hours in negotiating the crossing of the English channel. demonstrating at once their speed and sea-going ability.

See the International Speed Boat Races, Biscayne Bay, Miami Beach, March 25 and 26th.



Among the many events is the contest for the Star Island Trophy, emblematic of the Outboard Championship of North America.

Come to MIAMI BEACH

America's Winter Playground of Everlasting Summer

MIAMI BEACH, the most famed of all winter resorts, bids you to come and enjoy its unsurpassed facilities for all forms of summer sports . . .

BOATING - BATHING - FISHING
GOLF - POLO - TENNIS - MOTORING

You'll never grow weary of its soft, sunshiny climate, and its wide diversity of attractions. A visit to Miami Beach is a tonic for tired nerves. Spend your winter vacation at this paradise of tropical charm. For hotel accommodations address:

THE CARL G. FISHER HOTELS
Flamingo — Nautilus — Lincoln — King Cole — Boulevard
MIAMI BEACH, FLORIDA

Most Recent Important Trophy
For Outboard Motors

ROUND-HILL-TROPHY

Round Hill Trophy
(Now in Making)
Total Height, 36 inches

To be presented by Col. E. H. R. Green to the New Bedford Yacht Club

First Competition, August, 1930

Designed and Made by
J. E. CALDWELL & CO.
PHILADELPHIA

MASS PRODUCTION FOR BOATS

(Continued from page 169)

which have been so successful in the adoption of this form of construction on some of our best known motor cars.

We expect to engage on a quantity basis in the manufacture of seaplanes and amphibians. Our plant at Newport News has been laid out with this object in view and, when completed within the next few months, will have a protected harbor and marine basin for the launching and testing of Dodge boats and Dodge aircraft. It is expected that the Dodge aircraft will introduce some new designs in all metal construction.

Personally, I have taken charge of the department of foreign research and shall spend most of my time visiting European boat building and aircraft factories, studying all types of designs, materials and manufacturing processes. I have already learned and forwarded to the company in America a number of interesting things which are entirely new to American boat builders. Some of these ideas are incorporated in our 1930 boats. In addition to establishing Dodge dealerships throughout Europe, I expect to travel several times a year to the Orient, South America, Australia and other distant lands to establish distributorships for Dodge boats and Dodge aircraft.

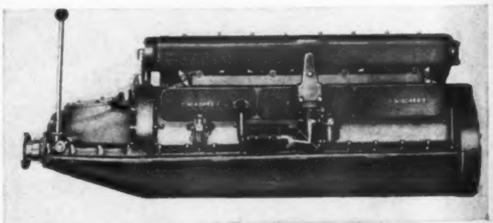
A particularly new and striking feature of Dodge boats this year is the use on all models of artistic figureheads instead of the plain bows current on all other American boats. This is a distinctly new style note which we expect to catch on immediately and to become universally adopted within the next year or so.

We feel that, after twenty-five years of arduous existence, the American motor boat industry is now about to come into the long delayed prosperity that its leaders have dreamed of for many years. To take advantage, however, of the new popularity of motorboating and to secure an adequate share of the new prosperity, it will be necessary for American boat builders to adopt, in their manufacturing and merchandising methods, the principles of efficiency and mass-production which have made our automobile industry the world leader it is. We feel that we are taking the lead in a boating development of a revolutionary nature for which our past motor car and motor boat experience has particularly fitted us.

Complete specifications of the Dodge boats for 1930 will be found elsewhere in this issue.

All models of 1930 Dodge boats are available for immediate delivery with the exception of those powered with the Lycoming 300 horsepower engine. With these models delivery will depend upon the delivery of this motor to us.

During Show week, all of these models, with the exception of the twin screw cruiser and the 300 horsepower boats, will be displayed at the National Motor Boat Show in the enormous Dodge show space on the mezzanine floor. They will also be exhibited, after a public reception, at the national sales headquarters in New York.



The new model Niagara eight is one of two engines of this type. Both are fast and powerful

THE TREND IN MARINE ENGINE DESIGN

(Continued from page 122)

with runabout and cruiser speeds reveals the need for a tremendous increase of power for a gain of even three or four miles per hour additional boat speeds. This is particularly true of speed cruisers. Certainly common sense must rule, and where it does you will discover more real boating enjoyment, more pleasure derived from the boat you own.

Medium duty power has been somewhat neglected—both by the manufacturer and by the yachting public as well. Our speed mania, tempered with certain common sense practice, has even gone to the reduction gear—high speed motor combination. The reduction gear is here to stay, and as the gears themselves are perfected in their reliability and quietness, their use will grow

"A Beautiful Boat . . . is it SAFETY EQUIPPED?"

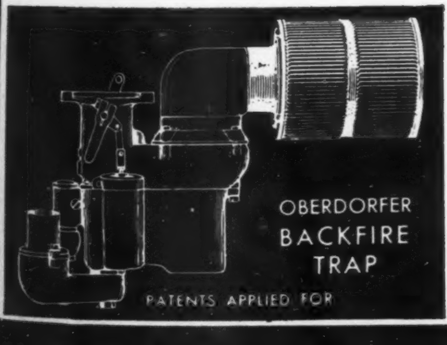
BE sure to ask this all-important question when considering a new boat or motor. You cannot fully enjoy the greatest of all sports unless your mind is at ease concerning the safety of your boat and the lives it carries.

PATENTS APPLIED FOR

THE MASTER
Automatic Electric Bilge Pump

Insist that the hazard of fire caused by the backfire of the motor is completely removed by the use of an OBERDORFER BACKFIRE TRAP—an Underwriters' approved device.

Make certain that the hazard of bilge water is eliminated by the installation of an OBERDORFER AUTOMATIC ELECTRIC BILGE PUMP in your boat. Many instances are on record where considerable damage to boats has been prevented by the faithful action of one of these remarkable pumps, and even loss of life avoided.



OBERDORFER
BACKFIRE
TRAP

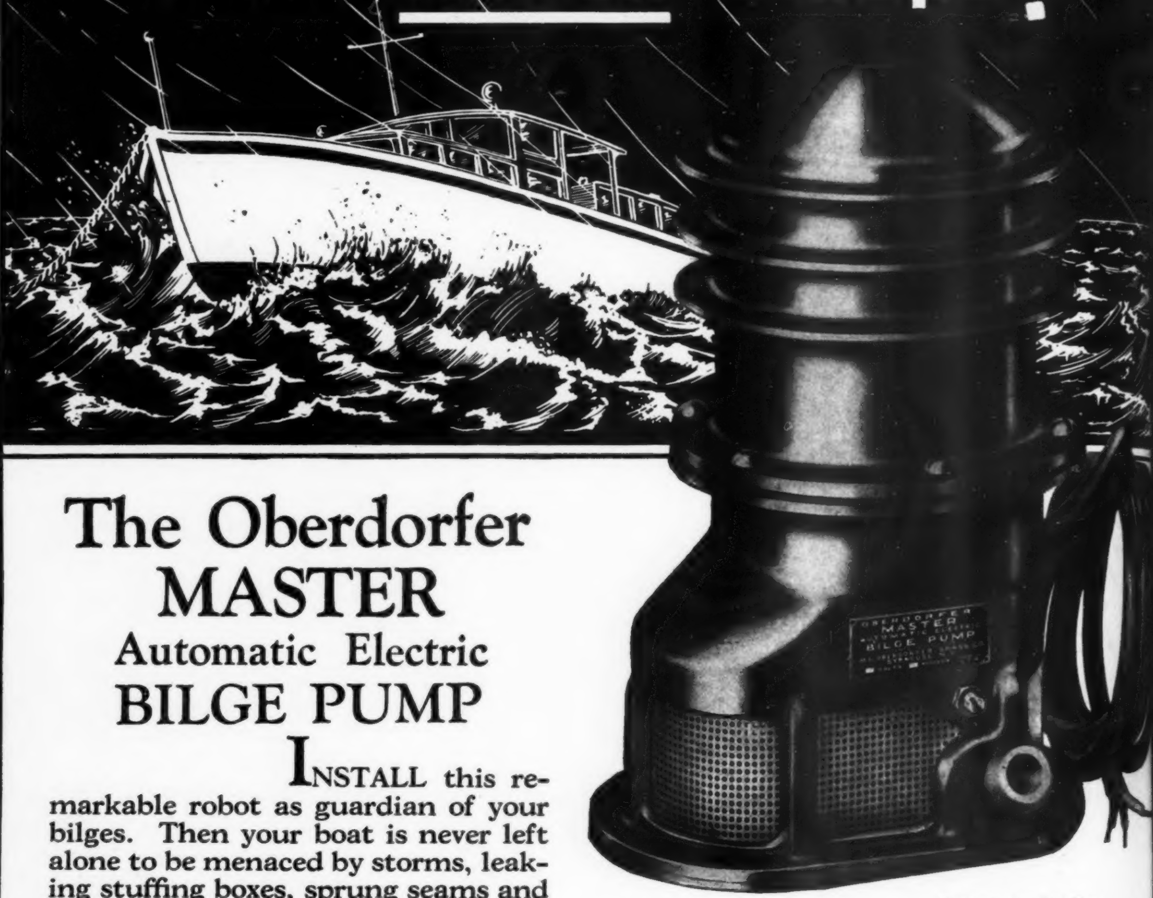
Both of these vital safety devices can be installed on any boat. The realization that your boat is safety equipped will mean much to your peace of mind.

At the Show—Booths 75-76

M. L. Oberdorfer Brass Co., 2200 Thompson Rd., Syracuse, N. Y.

Oberdorfer Pumps

A Member of Your Crew That NEVER Sleeps!



Patents Applied For

The Oberdorfer MASTER

Automatic Electric BILGE PUMP

INSTALL this remarkable robot as guardian of your bilges. Then your boat is never left alone to be menaced by storms, leaking stuffing boxes, sprung seams and other causes of bilge water accumulation.

When the level of the bilge water rises to a certain point the OBERDORFER AUTOMATIC ELECTRIC BILGE PUMP, maintaining a sleepless vigil, snaps into action, and keeps pumping until the level is lowered.

Made throughout of non-corrosive metals and is unaffected by salt water. Low current consumption. Automatic or constant action as desired from remote switch.

The "Master" is built for heavy duty and is available in 6, 12, and 32 volt units.

At the Show—Booths 75-76

Patents Applied For

The Improved MODEL "B"

Recommended for smaller boats up to about 35 feet in length. Operates the same as the "Master" model. Available in 6 and 12 volt units.

M. L. OBERDORFER
BRASS COMPANY
2200 Thompson Road
Syracuse, N. Y.

Oberdorfer Pumps

The Oberdorfer Backfire Trap Makes Boating the Safest of Sports

The Oberdorfer Backfire Trap has been submitted to Underwriters' Laboratories and has successfully passed their test requirements.

Patents Applied For

It Traps and Kills the Flame!

At the Show Booths 75-76

The most terrific backfire from your carburetor is rendered harmless by the Oberdorfer Backfire Trap, which not only *arrests* but also *traps* and *kills* the force and flame. When this safety device is installed on the air horn of your carburetor a grave fire hazard is definitely removed.

Manufactured exclusively for the marine field, the Oberdorfer Backfire Trap is built entirely of non-corrosive metals and is unaffected by salt air or spray.

Circle shows how flame shoots out of carburetor with great force in a backfire explosion. The Oberdorfer Backfire Trap is much more effective than a simple flame arresting or deflecting device as it positively traps and kills the flame. They are built to withstand the force of the most terriffic backfire possible. You can buy them now from your dealer.

MAIL THIS COUPON NOW

M. L. OBERDORFER BRASS CO.
2200 Thompson Road, Syracuse, N. Y.

Please send prices and full information about the Oberdorfer Backfire Trap.

Make and model of motor..........

....

Number of cylinders..........

Make, type, and size of carburetor..........

Name..........

Street..........

City..........

Please print or typewrite

Oberdorfer Products

WHAT THE WELL EQUIPPED BOAT WILL HAVE

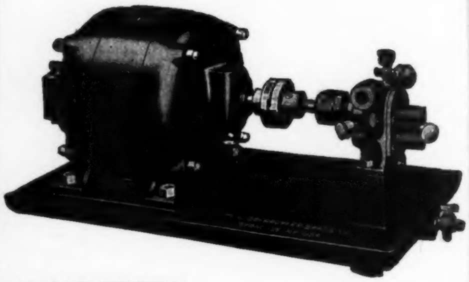
M. L. OBERDORFER
TYPE E
SYRACUSE, N.Y.

HAND BILGE PUMP

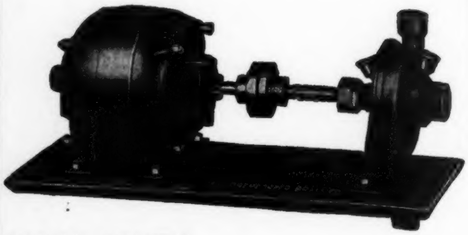
WHEN current is not available, or as an auxiliary to a motor-driven pump, the Oberdorfer Hand Bilge Pump gives splendid satisfaction. Speedy and positive in action. Detachable handle.

Oberdorfer Motor-Driven Pumping Outfits with gear or centrifugal pumps are widely used as all-purpose pumping outfits. They are chiefly used for deck flushing, fire use, bilge pumping, lavatory and galley water supply, and fuel pumping—with dozens of other possible uses.

For over half a century Oberdorfer Bronze Gear Circulating Pumps have helped to keep marine motors functioning smoothly. Available in types, forms, and sizes for any make or model of marine motor and for converting automobile motors. Double bearing and fully lubricated. A new circulating pump often performs wonders in pepping up an old motor.

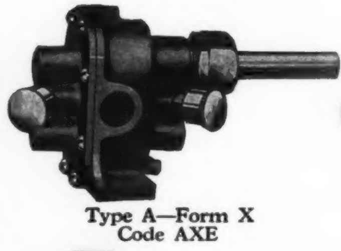


MOTOR DRIVEN GEAR PUMP

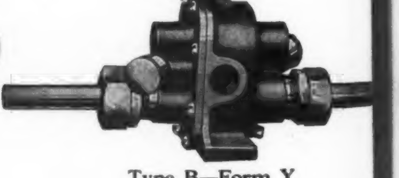


MOTOR DRIVEN CENTRIFUGAL PUMP

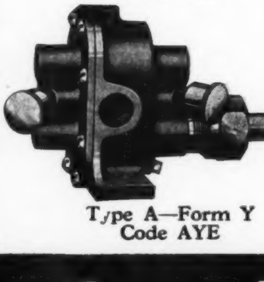
OBERDORFER
Bronze Gear Circulating Pumps



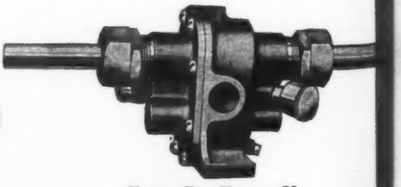
Type A—Form X
Code AXE



Type B—Form Y
Code BYE



Type A—Form Y
Code AYE



Type B—Form X
Code BEX

At the Show—Booths 75-76

The Oberdorfer line of marine pumps is outstanding for its completeness, efficiency, and dependability. Every Oberdorfer Pump is made of non-corrosive bronze throughout. Practically every worth-while marine supply dealer handles these famous pumps.

Write for complete data on Oberdorfer Pumps

M. L. OBERDORFER
BRASS COMPANY
Makers of Pumps Since 1875
2200 Thompson Rd., Syracuse, N. Y.

Oberdorfer Pumps

Printed in U. S. A.

SAFETY-BUILT

FOR SPEED AT SEA

Four Handsome Commuters
Each a Masterpiece of Cruising Comfort

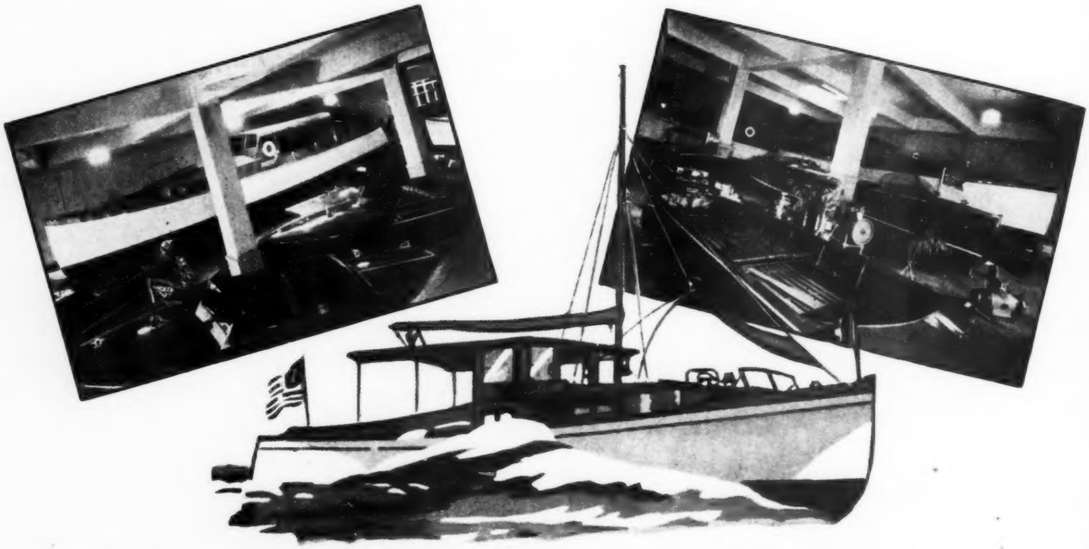
The four new Robinson Seagull Commuter and Cruiser models for 1930 become a challenge to your own instincts for unrivaled speeds—for complete cruising luxury—and for the social distinctions which possession of such a dashing, devil-may-care type of fast craft brings to its owner. Two 39 foot models, the Seagull Sedan Cruiser and the Seagull Sport Sedan provide full cruising accommodations for four with riding room for twenty at a pinch. The sport model has a forward cockpit with driving controls on the bridge—the sedan cruiser has the driver's seat located in the sedan cabin, forward. Both boats give 28 to 32 miles per hour—Sterling, Hall Scott or Kermath powered. The 40 foot Robinson Speed Cruiser deserves the serious consideration of those desiring speed, stout design, sport cruising in single or twin screw motor installations. You will find the 45 foot Custom Commuter (built to special order only) a design that will satisfactorily supplant a boat of much larger size with its splendid owner accommodations, much simpler upkeep and wide cruising radius. *A new Robinson catalog fully describing the entire line is ready for mailing.*

ROBINSON
Seagull
CRUISERS

ROBINSON
MARINE CONSTRUCTION CO.
BENTON HARBOR, MICHIGAN

Serving all New England

BOSTON'S PERMANENT BOAT and ENGINE SHOW



SPECIAL NAUTICAL SALON!

WEEK OF JAN. 27 - FEB. 1

FEATURING a complete New England display during week directly following New York show, exhibiting 1930 models . . . MATTHEWS "46" DE LUXE SPORT CRUISER . . . MATTHEWS "38" and RICHARDSON CRUISERS . . . HACKERCRAFT RUNABOUTS, and DE LUXE 42 mile twin screw HACKER COMMUTER.

MARINE engine and auxiliary display, comprising a unique model engine room of twin screw WINTON DIESELS . . . New models of STERLING . . . RED WING . . . KERMATH . . . engines. Electric windlasses . . Rubber bearings . . Edison batteries and other specialties.

A SPECIAL invitation extended to everyone, to a show of exceptional interest in its display of many new and interesting boats and engines for the 1930 season.

If you can't call, write. Your requirements will receive expert attention.

Walter H. Moreton Corp.

1043-45 COMMONWEALTH AVE.,
BOSTON, MASS.
ESTABLISHED 1912

Here are 10 *Distinctive* FEATURES That Make Your 1930 Matthews the Staunchest Boats Afloat

1 Matthews cruisers are of stock design with tremendous savings effected by volume buying—use of modern machinery and skilled workmen. This saving is passed on to the owner.

2 All Matthews designs are tested six months in advance—while 39 years experience is your guarantee of a better boat backed by qualified knowledge.

3 Matthews hulls give more speed—yet by test they weigh approximately 50% more than almost all other standardized craft of comparable size.

4 Owner safety is carefully guarded by Matthews alertness. Engine fittings, fuel storage devices, carburetor and ignition controls, engine room ventilation are all of special Matthews design.

5 Concentrating on 38 and 46 foot sizes only—constantly improving them—Matthews provides supreme cruiser values.

6 Matthews hulls are custom-built from highest quality materials—but a five boat schedule every week is the answer to Matthews low price range—$6,800 to $15,500.

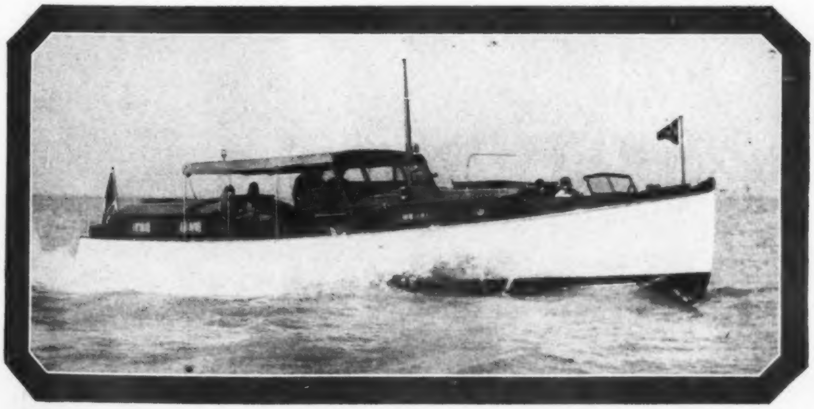
7 Matthews cruisers are so refined that they give two to three miles an hour more speed—ride easier than any boats built.

8 Matthews galley, toilet and sleeping accommodations are without an equal in boats of even twice the cost or size.

9 Matthews seagoing qualities are a bye-word with yachtsmen—Even the hardboiled fishermen of the New England coast concede their staunch, husky riding qualities!

10 Matthews design includes much special equipment—equips each boat with a hundred and one accessories of their own invention and manufacture to modernize yachting.

January 27 to February 1st, 1930
Matthews Cruisers will be on Display
New England Motor Boat Show
1043 Commonwealth Avenue
Boston, Massachusetts



10 Stock Models . . . 24 Attractive Arrangements

"Matthews 38"

MATTHEWS "46"

The
MATTHEWS COMPANY
PORT CLINTON - OHIO
Designers and Builders of Boats of Distinction . . . . . Since 1890

SALES AND SERVICE—Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit; Boardman & Flower, 1740 Van Ness Ave., San Francisco; Bruns, Kimball & CO., cor. 5th Ave., and 15th St., New York City; Florida Branch, 17 McAllister Arcade, Miami; Lake Erie Yacht Brokerage Corp., 1365 W. 117th St., Cleveland; Wm. V. Masson, 421 Munsey Bldg., Baltimore; Mississippi Valley Yacht Sales, Times Bldg., Alton, Ill.; Walter H. Moreton Corp., 1045 Commonwealth Ave., Boston; J. A. Scarlett, 436 East 2nd St., Cincinnati; R. Sealy, Commerce Bldg., Galveston; Robert V. Staats, Inc., 675 So. Park View Los Angeles.

LEUTZ
RADIO RECEIVERS
FOR THE
DISCRIMINATING GROUP

LEUTZ SILVER GHOST

The Largest and Most Powerful Broadcasting Receiver Available Today

SILVER GHOST CONSOLE

Universal Wave-length—Suitable for Use the World Over

THE owners of Leutz radios include some of the world's most prominent persons,—people who demand the finest things of life. Incidentally these Leutz owners insist they have the best radio made. For nine years we have specialized in the designing and building of high-grade receivers for installation the world over, and have yet to meet a dissatisfied customer.

The Leutz line of fine custom radio receivers includes the Seven Seas Console for average size homes, the Seven Seas Low Boy for small apartments, the Seven Seas Egyptian Model for large homes, the Silver Ghost Console for larger residences, the Phantom Model for use in Continental Europe and boats on world cruises, and the New Short Wave Receiver for world-wide reception.

Correspondence is invited with our Engineering Department who will be glad to recommend the most practical radio for your individual purpose. This service incurs no obligation on your part.

C. R. LEUTZ, Inc.

Altoona, Pa., U. S. A.

Cables: "Experinfo' New York

Sales Offices in New York, Los Angeles and Paris

They're Out for New Records at WEST PALM BEACH This Year

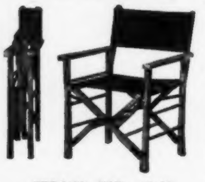
YOU'RE going to shake hands with many another racing fan at the Eighth Annual Washington's Birthday Regatta (Feb. 21 and 22) this year. What a meet it will be! All kinds of advance threats about speed and record-grabbing.

And when you come, pack up your whole wardrobe of recreation clothes.

West Palm Beach this year offers you all the recreations you can well expect—you know them all besides horse racing, aviation and some entirely new sport and play surprises. Read it all in our new booklet—you can reserve your accommodations too, from the certified booklet list of hotels and apartments. Address L. G. SWINEHART, P. O. Drawer B-58.

WEST PALM BEACH—Florida

The Chair for Perfect Relaxation



CHAIR NO. 40-Y
Set-in rubber feet prevent slipping and marring of decks. This chair also in red or green lacquer with colored covers for home and club use.

"GOLD MEDAL" Folding Yacht Chairs were designed to provide the utmost in comfort, aboard or ashore. The double-filled, reinforced canvas cover shapes itself to the most restful positions—it will not sag.

"GOLD MEDAL" Chairs are strongly made to give years of service. They are easily carried about and fold compactly for stowage. Seasoned hardwood frames are stained mahogany and varnished. All metal parts are of heavy gauge brass.

GOLD MEDAL FOLDING FURNITURE CO.
1754B Packard Ave.
Racine, Wis.

CHAIR NO. 40 GT
CHAIR NO. 35 RM
CHAIR NO. 41 GS
STOOL NO. 5
CHAIR NO. 6
STEEL BED NO. 80
COT NO. 1
"GOLD MEDAL"
TRADE MARK REG. U. S. PAT. OFF.
Folding Furniture
RECLINING CHAIR NO. 11 P
TABLE NO. 14

LAND OR SEA—WHICH?

(*Continued from page* 176)

steered a proper course. He came aboard, checked the course and found it O.K. He then moved the boat around while he took bearings of points on shore with which he was familiar and said that the compass was most certainly off. He continued his investigations and discovered that the compass which was in front of the wheel, stuck through into the cabin, that Mrs. Walpole had placed her noble bread box in a convenient position almost touching the compass, that this gave the poor compass undue deviation and accounted for the strange result of perfect steering. This was most interesting to landlubbers, but it was not a nerve racking and dangerous error as was the almost hourly experience on an automobile trip. Prompt investigation of anything not on the bill of fare or not understood by the embryo skipper will almost invariably keep him out of serious trouble.

The offending bread box was removed to a safe distance and the trip continued. After this the various buoys on the plotted course appeared as if run by clockwork, and in another two and a half hours the boat was off Stratford Point. The engine was stopped. The dinghy, rubber boat and Barnacle were launched. Mrs. Walpole prepared lunch while the rest of the crew went swimming, fishing or rowing as suited individual tastes. Lunch cost no more than a meal at home. No hotel had to be found and bought. There was no tipping. Even the rubber boat refused to be tipped in spite of strenuous efforts on the part of the youngest Walpole. Mr. Walpole did not have to purchase his old hat again from a scornful Charge d'Affairs in a coat room, no bathing houses had to be hired, the sea air made everyone feel pepped up, and the whole family was happy. The swimming, fishing, rowing and meal consumed about two and a half hours. Probably as good a meal could have been bought at some seaside hotel, but it could not have been more cozy or comfortable. The bathing and fishing could not have been equalled by any crowded shore place, and the whole cost of the two and a half hours joy was approximately 10% of what it would have cost from shore.

The small boats were hauled up and lashed fast and the trip continued. In the late afternoon the yacht nosed cautiously into the New Haven Harbor and tied up at the New Haven Yacht Club, where twenty gallons of gasoline was purchased. This was about five times as much as would have been required by an automobile running from Rye to New Haven, but what is a few gallons of gas between real sailors, and, as the cigarette people say, "What a whale of a difference a few cents make." In fact many advertisements might be appropriately quoted:—"All the way by water." "All the benefits of a sea voyage." "No smoke, no dust, no traffic jams." "Restful resting." "Own your own home." "Back to nature."

After filling up with gas Mr. Walpole navigated his boat out into the harbor, bent a rope on his anchor and heaved it overboard. While Mrs. Walpole was preparing supper of flounders caught that afternoon and the kids were out rowing, a man in a row boat sang out, "Hi Skipper, you're draggin' you're anchor." Never before had Walpole actually been called "Skipper." He was proud and pleased. At the same time he was alarmed at the information. In his mind, to drag the anchor was the last thing to be written in the log before the good ship was wrecked and all on board lost. The boatman saw his evident alarm and in a very friendly way suggested that the anchor be pulled up for inspection. Not only that, he came on board and helped. When the anchor was up, he was not scornful, he did not try to make capital out of a fellow sailor's ignorance, he did not even laugh. He just remarked, "Wal, that's one of them new fangled contraptions that has to be rigged up before it is used. You heaved it over all folded up the way it is stowed on deck to take up less room, and it won't hold that way." There was a world of kind diplomacy in this short speech, and again there was a friend in need to demonstrate the difference between the land attitude and the sea attitude towards those in trouble. With the aid of the boatman, the mistake was remedied, and again all was peaceful.

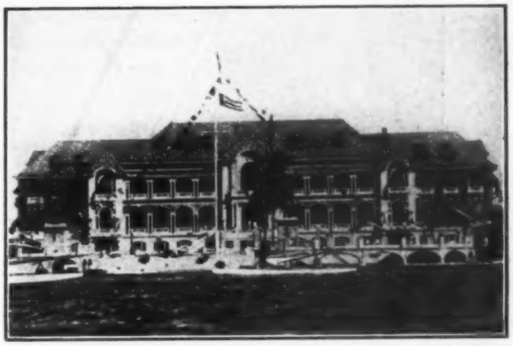
By this time it was getting dark, lights were lit, and the family assembled for supper. This was another delightful home meal and the fish, being taken en passant, as the chess players say, cost nothing. The sea air made everyone sleepy and soon after supper each one was stowed in a comfortable bunk and slept like tired sailors till morning. Each one had a swim before breakfast, and the same kind of breakfast as enjoyed at home except that appetites were much keener. The cost of the two meals and lodging was under $3.00 instead of the usual $35.00. Here again was food for thought. The home bound trip was made without error. Mr. Walpole was rapidly becoming a real skipper, and the trip was voted a big success. On Monday the bread winner went back to business full of health and

(*Continued on page* 486)

Havana

Invites You to Its Regatta

Havana's famous Morro Castle is the mecca of visitors to Cuba. The ancient and picturesque fortress faces on one of the best speed boat courses in North America

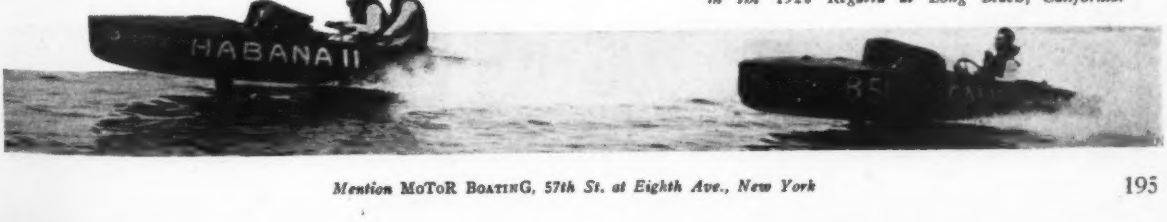


The Habana Yacht Club is one of the finest in the world.

AMERICAN yachtsmen and racing enthusiasts are invited by the Cuban National Tourist Commission to attend Havana's Annual Speed Boat Regatta March 29th and 30th. The programme includes some of the fastest boats in the world. The trophies include a Gold Cup for 151-hydroplanes and a special trophy for the 510-inch class. This is Cuba's gala boating event. We earnestly urge you to come. For further information address:

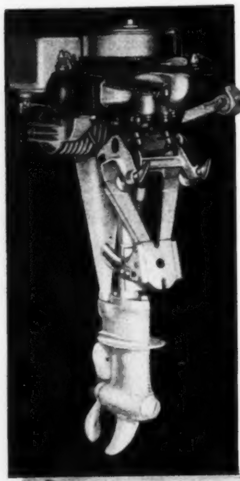
RAFAEL POSSO
National Tourist Commission
Habana Yacht Club, Havana, Cuba

Habana II, a popular Cuban speed boat participating in the 1928 Regatta at Long Beach, California.



GENERAL ELECTRIC

Lacquered



Terminals are *DRY with G-E Textolite Caps to protect them.*

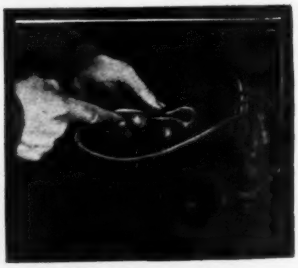
Hot, Fat Sparks In Spite of Splash and Spray!

Snappy, toug little outboar motors—wh a job *they* have! Wet, hot, exposed.

You can *count* on yours . . . every start . . . if you wire i with G-E *Lacquered* Ignition Cable—and G-E Textoli Caps. They are your best insurance against wet plug . . . power loss . . . engine failure.

Full current is delivered at spark gaps . . . no hidde leaks of electricity . . . no "shorts" across wet surfaces such as ordinary cables and terminals permit.

KINK YOUR SPARK PLUG WIRES

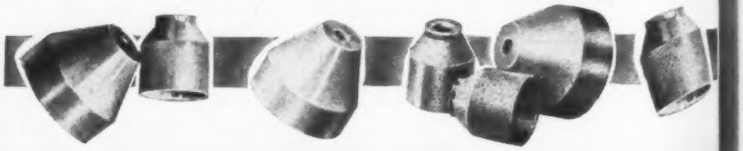


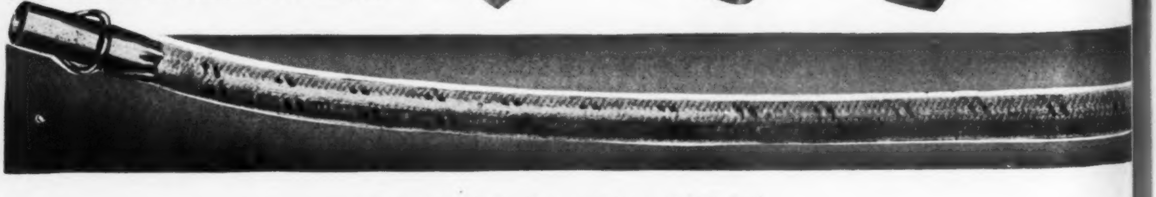
If you see a fine pattern of cracks in the insulation at a sharp bend, look out for trouble! Replace those wires at once.

G-E TEXTOLITE CAPS

Are Good Insulators

Textolite is an insulating compound General Electric has used for years. Caps made of it prevent short circuits . . . fit so snugly that plug and distributor terminals are splash-proof!





IGNITION CABLE

Puts NEW Reliability into any engine

STOPS HIDDEN POWER LEAKS

Can you leave your boat well for a week-end spin comfortably confident? Or does your engine sometimes stutter . . . especially in thick weather?

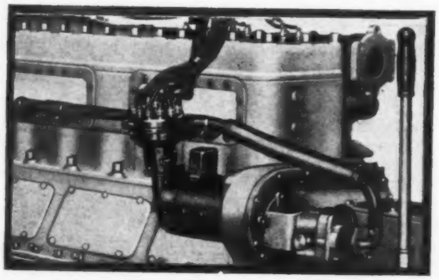
Thousands of good engines are spark-starved. High-tension current headed for the plugs breaks through weather-weakened insulation . . . leaks away unsuspected. Fog, humidity, spray—salt or fresh—soon ruin ordinary insulation.

G-E Lacquer Weatherproofs Your Spark System

General Electric offers you the remedy—G-E *Lacquered* Ignition Cable. It's rugged, rubber-covered wire sheathed in tough, flexible lacquer . . . *12 coats of it* . . . special lacquer developed by General Electric research.

This new lacquered cable *defeats* weather . . . does not disintegrate under engine heat or water . . . withstands oil, gas, fumes, abrasion. And it lasts!

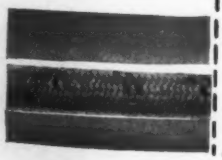
Ask your supply house for G-E *Lacquered* Ignition Cable with terminals and Textolite Caps to fit any spark plug . . . or use the coupon.



Don't Leave A Weak Spot in a sturdy power unit. Get all the power the engine can deliver. G-E *Lacquered* Ignition Cable costs little—saves much.

GENERAL ELECTRIC

MERCHANDISE PRODUCTS

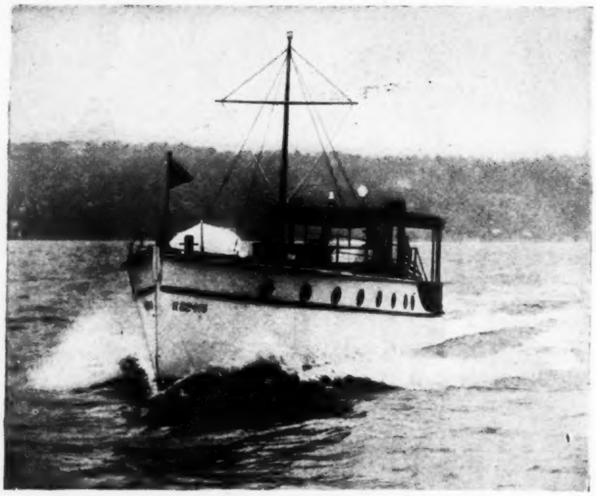


FIND OUT ABOUT THIS

Section A-532, Merchandise Dept.
General Electric Co., Bridgeport, Conn.

Please tell me about G-E *Lacquered* Ignition Cable and G-E Textolite Caps.

Name.. *Address*..



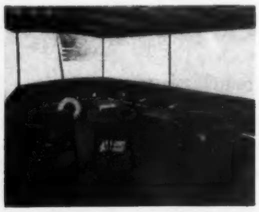
You Can Have a Wonderful Summer *in a* Long Island Forty!

Here's a roomy, seaworthy, beautiful floating home . . . small enough to be handled by one man . . . plenty of room for six and crew . . . stateroom for two . . . main cabin with berths for four . . . single berth for "paid hand" . . . every berth a restful, sleep-provoking box spring . . . roomy lockers for shore-going clothes . . . galley with every convenience for satisfying sea-going appetites . . . interior decorations that strike a new note in color harmony.

A whale of an after deck, big enough for dancing and dining . . . wide forward deck for just loafing . . . both decks guarded by stout rails . . . and when you leave the wheel to go forward, you walk like a man, not climb like an acrobat! Buda 6-cylinder, 115 horse engine gives 12-14 real miles an hour.

And . . . a pleasant surprise . . . this strictly custom-built cruiser is priced at only $14,500 . . . less than most "production" builders ask . . . you can run her all season at surprisingly low cost.

Sleep aboard the Forty as comfortably as you sleep at home. Here's the main cabin, for four; and, forward, the double stateroom . . . every berth a box spring.



For deck space like this, look to at least a 55-footer of any other design. Here's room for lots of full-sized deck chairs; the dinner table; dancing.

Good boats will be scarce this season . . . you know how it was last year . . . write to-day for descriptive folder MBG, or come out to "Port Jeff" and see an actual Long Island Forty.

LONG ISLAND SHIPYARD, Inc.
Port Jefferson, N. Y.
Telephone, Port Jefferson 84

WHAT IS A MARINE ENGINE?

(*Continued from page* 112)

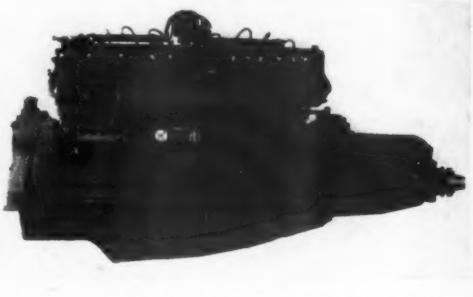
Connecting rods should be as light as possible of either duraluminum or high grade steel. The bearing metal at lower end of rod should be cast directly to the rod material as this method provides better heat transfer and is lighter and more reliable than separate bearings.

When possible two small, rather than one large exhaust valve should be used. The inlet valve should be the tulip with some thought given to streamline of both valve and port.

The cylinder should be machined on the outside as well as the bore so as to eliminate uneven expansion as well as being a better service proposition. The crankshaft should be drilled as much as possible and counter weighted where necessary, and carefully balanced as the shaft is really the backbone of the motor.

A clutch and sliding gear type transmission can be used to advantage as they are cheap, light, reliable, balanced and give little trouble. A brake on the propeller shaft could be used while changing from forward to reverse. Although the present type gear can be designed to give good service.

Whenever possible the carbureter air supply should be taken from a point outside of the engine compartment so as to insure cool fresh air and at the same time eliminate the fire hazard in case of back fire. Great care should be taken to keep the fuel tanks and supply line away from the exhaust pipe or places that will cause the gasoline to form bubbles inside the supply pipe. It does not take much heat near the fuel system to cause poor low speed performance and a loss of revolutions at the top end after a few minutes operation.



The Lycoming series for 1930 *will include two eight cylinder engines,* 122 *and* 160 *h.p. each*

Owing to the frequent collection of moisture on an engine lying idle in a boat well for a few days, the ignition system should be very accessible unless some means are provided to dry out the distributor cover and breaker box, such as the use of a small heating coil built into the distributor cover and operated by an independent switch on the instrument panel. The starting motor should be large enough to spin the engine not less than 150 r.p.m. at a temperature of 30 degrees F. and a battery located close to the starting motor large enough to crank the motor continuously for a period of three minutes or more.

Quick cranking for a few seconds is better than slow cranking for long periods.

A flexible coupling should be used between engine and propeller shaft.

The boat builder can help a lot by paying more attention to propeller and shaft sizes and balance. There is little use in building a smooth running engine and connecting it to a propeller away out of balance.

And as for propeller design, the door is wide open. Very little has been done along this line for years.

FULL LINE OF MARINE HARDWARE

The exhibit at the Show of Wilcox, Crittenden & Co., Inc. manufacturers of dependable marine hardware, will be in larger quarters at Booth 203 on the Lexington Avenue side of the third floor.

For years the Wilcox, Crittenden exhibit has been on the 47th Street side, but due to the many new fittings recently added more space was necessary to provide convenient opportunity for inspection by yachtsmen and builders.

This year visitors will see many new finishes in different metals at the W. C. booth; also new designs, modern designs of articles of proven value, new steerers, new ventilators, the improved strength tested outboard racing wheels, new engine controls, and many other items.

100% Pure
Petroleum Products
High Flash and Fire
Tests
Low Free Carbon
Content
Free from Acid and
Impurities
Retains its Body
under Extreme Heat

,, and we can PROVE it!

And have proved it again and again . . . proved it scientifically by scores of laboratory tests . . . proved it practically by records of the numerous races in which EMPIRE lubricated craft finished first! . . . proved the advantages of a pure Pennsylvania crude oil product produced exclusively for marine engine use!

Boat racers choose EMPIRE for greater speed . . . boat builders prefer it for better lubrication . . . boat owners insist upon it for greatest economy—three practical results of the four technical features which make EMPIRE the highest quality lubricant at the lowest cost per mile!

Permit No. 98

EMPIRE
Leads them all
MARINE OIL
EMPIRE MARINE OIL

EMPIRE

Guaranteed
100% PURE
PENNSYLVANIA
OIL

PENNSYLVANIA PETROLEUM PRODUCTS Co., Inc.
PROVIDENCE , , , R. I.

Here's a Polish That Leaves No White Deposit

NOTHING mars a polishing job like a chalky, white deposit left in seams and crevices. I. C. U. Metal Polish imparts a high, lasting lustre to brass, copper, bronze and other polishable metals, with little labor, and without a white deposit.

It is harmless, non-acid, greaseless. An ideal polish for marine use, for, by its chemical make-up, it produces a lustre that tends strongly to delay tarnishing.

Sold in the marine field for many years. If not at your dealer's, we will be glad to send you a sample free—or any of the following sizes prepaid: 1 gal., $1.75; 1 qt., $.75; 1 pt., $.45. Give name of your dealer with order.

Dealers—Write!

THE LIVINGSTON CO., DIV. T
NEW HAVEN, CONN.

I·C·U
METAL POLISH
for BRASS, COPPER, BRONZE

IT'S THE OWNER'S FAULT

(*Continued from page* 119)

Owner repeats his previous question.

Builder: I'm a boat-builder. Not a mechanic.

Owner: I happen to know that you will get a good fat discount if I buy the motor through you. I'm the one who ought to get that discount, but since I can't, I'm going to have my boat built by the man who will look after me and give me honest-to goodness service. Are you the man?

Depending on the answer to that question the builder gets the job or does not get it.

But suppose the owner prefers to let the builder stand responsible only for the job of building the boat and buys his motor from the authorized dealer. Some such conversation as this may take place.

Owner: If I buy your motor will you see that it is properly installed?

Dealer: Boat-builders have a great deal of professional pride and don't like to have outsiders poking around their work.

Owner: I can understand that, but it is a matter that doesn't concern me. I'm building a boat for pleasure, and I can't get any pleasure if the motor goes back on me. If there is motor trouble it may not be your fault and it may not be the manufacturer's fault and it may not be the builder's fault. No matter whose fault it is, I am the one that suffers. But I'm not going to suffer. I'm going to buy the motor that carries a guarantee with it. Is that the motor you sell?

Dealer: I tell you what I'll do, Mister. I'll send a good reliable mechanic up to the yard to look over the installation. He'll check up the alignment, the wiring, the piping, and every little detail that experience has taught us may cause trouble. If anything is wrong I'll report to you and you must see that the builder corrects it. Then, the first day the boat is used I'll send the same inspector up to watch the performance of the motor. If he gives it his O. K., you bet I'll stand back of it.

Owner: How much does this service cost me?

Here the quoted conversation ends, because the dealer's answer must necessarily depend on the location of the builder's yard, and the cost of the motor. If the boat is going to be built close to the dealer's headquarters, so that travel expenses will not be large, and if the motor is a large, expensive one, the dealer can well afford to provide such service free. But if the distance is great and the motor is small the owner must reasonably expect to pay part or all of the cost of the inspection.

Even if he has to pay the whole bill it will be small in proportion to his total investment in the boat and, considered as insurance against trouble, it is well worth the expenditure. The principal thing for the prospective owner to do is make his arrangements beforehand. When a man has something to sell he will make many concessions that he is too busy to bother about after money has changed hands and he is looking around for another purchaser.

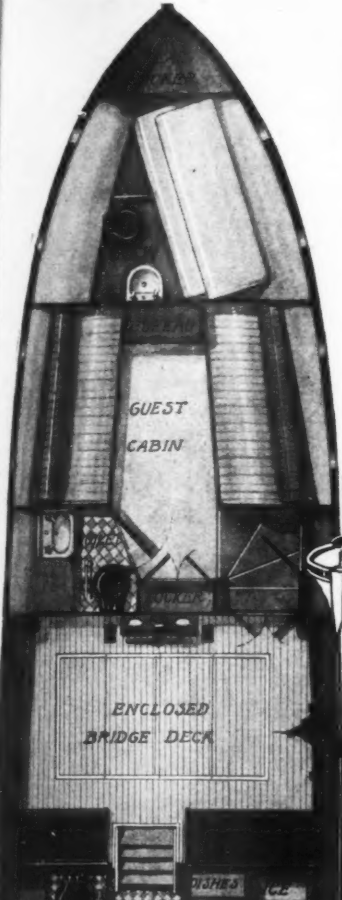
In interviewing people for data for this article I have heard many interesting facts and opinions expressed. One dealer told me, for instance, that he almost never had engine complaints from men who built their own boats and did the installations themselves. Such men, he said, take the trouble to read instructions, secure really expert advice, get the motor suited to the work it has to perform, and do the job right.

I heard of a boat-builder who gave a certain make of a motor a terrific black eye because one motor after another failed to function in the line of boats which he built. The trouble was finally found to be in the boats themselves. They whipped out of shape as soon as they were put in service, and it was only after they had been stiffened structurally that the motors lived up to the maker's claims.

I talked with a dealer who informed me that he spends a thousand dollars a month during the season inspecting new installations. His territory is a wide one, and in certain cases he has spent on inspections more than his commission for selling the engine. But he believes that his brand of service pays even when he loses money on a given job. He preaches no hypocritical sermon on Service for Service's sake. He says, rather, that a satisfied customer frequently means another sale, whereas a dissatisfied customer may mean the loss of a dozen sales.

According to still another man, ninety per cent. of motor troubles come from faulty installation, and my friend informs me that until dealers, builders, and owners are educated in such matters the troubles will continue. So, wherever the trouble starts, the fault lies at the public's door. If service is demanded it will be given.

And, incidentally, I am informed that if the public wants service it must arrange to get it through the week. Boats can't usually be brought to inspectors the way motor cars can be. The inspector has to go to the boat, and having gotten up at six o'clock for five days of the week and reached home at midnight, he likes to have his Saturday afternoon and Sunday off. The owner has to make some concessions.


CREW
GUEST
CABIN
LOCKER
ENCLOSED
BRIDGE DECK
DISHES
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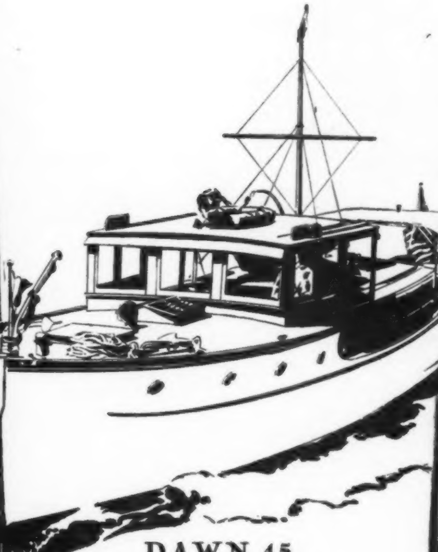
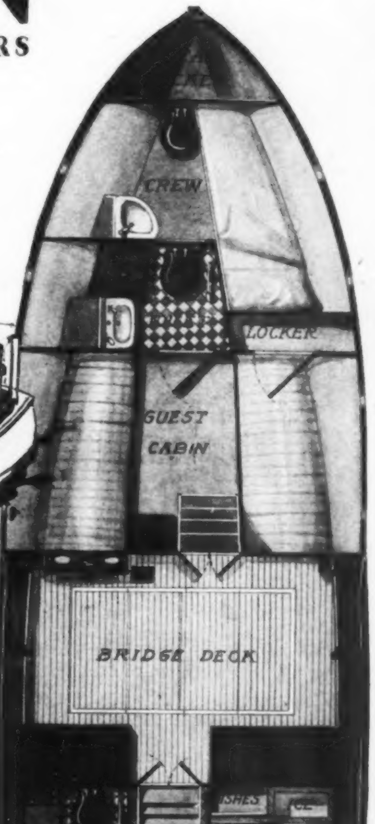
LOCKER
COCKPIT

DAWN

TWIN-SCREW CRUISERS




CREW
LOCKER
GUEST
CABIN
BRIDGE DECK
DISHES
ICE
OWNER'S
CABIN
COCKPIT

DAWN 45

gives the yachtsman a complete, comfortable and easy-working boat, that may be operated with one in crew. According to whether the Owner wishes to operate his own boat or not, this hand may be either a combination captain-engineer, or a steward-deckhand.

DAWN 48

is the long-looked-for step between a large cabin cruiser and a small yacht. She is just under proportions that would entail heavy maintenance and operating expense. The additional length has been distributed throughout the plan. The crew quarters are for two men and the engine-room permits option of sufficient power for better than 20 miles per hour.

DAWN TWIN-SCREW CRUISERS

are designed for the comfort and privacy of everyone aboard. No one passes through another's quarters to go above deck. The cabins are roomy and airy with every luxury and convenience. The joiner work is the finest. Dawn boats are beautiful as well as practical.

DAWN BOAT CORPORATION
Clason Point, New York City
Established 1906 Tel. Westchester 7000

DAWN 48-footer Express, powered by twin Sterling Petrels,
each 150 H.P.-Speed 22 M.P.H.
$23,800

DAWN 45-footer, powered by twin Lathrops,
each 70 H.P.-Speed 14 M.P.H.
$16,900

afloat at Clason Point

BUILDERS OF DE LUXE CRUISERS SINCE 1906

WOMEN HAVE EARNED THEIR RIGHT TO WINGS

- On every hand the American woman has accepted aviation as a vital factor in modern, progressive life . . . and to her many accomplishments has added the art of flying . . . justly earning her right to wings.
- The rapidity with which large numbers of young women have learned to fly is testimony to the fact that it is not difficult to pilot an airplane. Every spirited woman has the qualifications of a pilot, because with proper training and practice, flying is a science easily mastered. This is particularly true in airplanes which are distinctively safe, trustworthy and easy to fly.
- Spartan airplanes are trustworthy because of unerring stability . . . safe because of inbuilt strength and durability . . . easy to fly because of responsive power and control.

SPARTAN AIRCRAFT COMPANY • TULSA, OKLA.

SPARTAN
C-3-165

Write for folder describing the Spartan C-3-165 powered by the Wright "Whirlwind Five." Special equipment includes dual controls, metal propeller, booster magneto, gasoline gauge, air-speed indicator, oleo gear, 30 x 5 Bendix wheels and brakes, adjustable stabilizer, navigation lights. . . . . .

$5975
FLY AWAY TULSA

The new Spartan C-3-225 powered by the Wright "Whirlwind Seven" is priced at $7750 fly away Tulsa.

MISTER JARVIS—A MASTERLY CRUISER

(*Continued from page* 138)

described in the article on the 36-footer, Mister Simms, last month. The cockpit will be fitted with lead drains so as to keep free from water.

The house carlins will be made from 1½ by 2 inch white oak and set on 12-inch centers. The cabin top will be laid with ⅞ by 3 inch white pine tongue and groove lumber and covered with 10-ounce canvas duck.

The pilot house will be made from as light materials as possible, using ⅝-inch mahogany for the frame, ¾-inch mahogany for the sash and ⅝ by 3 inch white pine for the top; the latter to be covered with canvas.

Details for making the rudder are shown in Figure 3. I believe I covered the painting and many other items in the first part of the article on Mister Jarvis in the January number. Next month I have plans prepared for a 21-foot single cockpit runabout, a boat that will have a speed of 20 miles an hour with a reasonable amount of power.

Complete sets of blue prints for Mister Jarvis to a scale of ½ inch to the foot, or of any of the plans that have appeared in MoToR BoatinG in the past can be obtained at moderate cost. Write the Eidtor, 959 Eighth Avenue, New York, N. Y.

U. S. A. AN INTERNATIONAL FLYER

(*Continued from page* 138)

The complete rules for the 335 cubic inch, 21 foot International Class, follow:

1. The match shall consist of three heats of between 15 and 20 statute miles (each) in length to be held on 1, 2 or 3 days as the local Race Committee shall specify.

2. Course shall be laid in reasonably protected waters, not less than eight feet in depth and as free from turns as practicable, but the finish shall be at the starting line. Each lap or round of the course shall not be less than two statute miles and shall be subject to approval of Contest Board.

3. The start shall be a flying start with a preparatory signal to be given five minutes before starting time. The time by seconds, one minute before the starting time, shall be shown to the contestants by means of a large clock dial mounted near the starting line. The finish of each heat will be nine minutes after the first boat crosses the finishing line. No boat will be allowed to start later than five minutes after the starting gun in any heat. Boats failing to finish before the end of each heat, shall receive no points.

4. The winner of the match shall be determined by the point system whereby each boat starting and finishing a race of a match will receive as many points as is indicated in American Power Boat Association Rule XXXIX.

5. A boat to be eligible to compete shall be the bona fide property of one or more amateur members in good standing of the club it represents.

6. Competing boats shall be powered with one of the following motors:

			Cubic Inches
Chrysler	6 cylinder	3⅝x5	309.6
Gray	8 cylinder	3⅜x4½	322.2
Scripps	6 cylinder	3¾x5	331.2
Lycoming	8 cylinder	3¼x4½	298.8

Note: To this list will be added European motors which qualify.

The owner must furnish the local Race Committee with an affidavit signed by the engine manufacturer, specifying that the maximum horse power developed by the motor can in no case exceed 135 horsepower. The motors which develop a greater maximum than 135 horsepower will not be eligible to compete. Motors shall be stock in every particular, with the exception that changes of carbureter, piston rings, spark plugs, steering and throttle controls and self starters will be permitted.

7. Boats competing in this class shall have a waterline length of not less than 20 feet in racing trim. There shall be no other restrictions as to the hull.

8. No postponements from the advertised time of the start of the race shall be allowed for any cause except in the interest of the safety of the public or the contestants.

9. The motors in competing boats shall be equipped with an efficient method of idling.

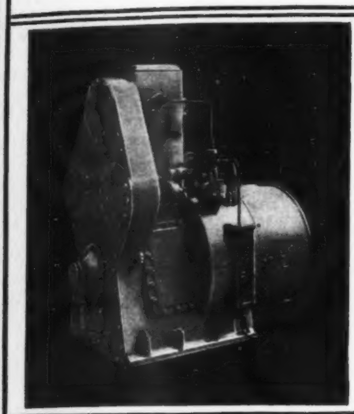
10. No form of mechanical supercharger or other auxiliary device shall be employed to increase the compression or volume of cylinders.

11. Unless otherwise specified herein, contests shall be governed by the latest A.P.B.A. racing rules.

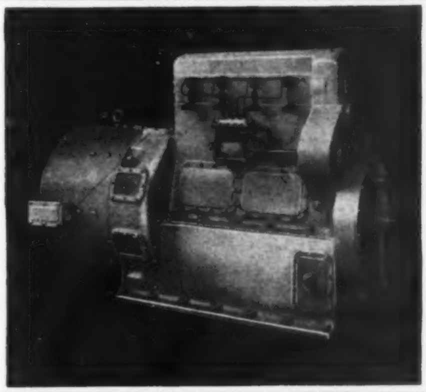
12. All turning buoys shall be passed on the driver's left.

13. Commercial fuel as approved by the Race Committee.

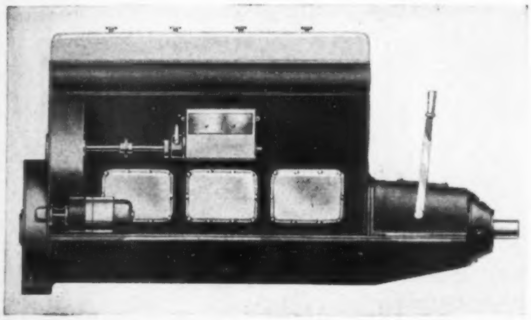
THE 1930 LINE OF TREIBER DIESELS



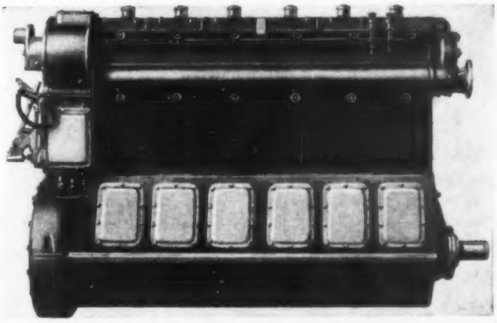
ELECTRIC GENERATING SETS are built in capacities of 7½, 15, 23, 35, 45, 50, and 70 K.W.

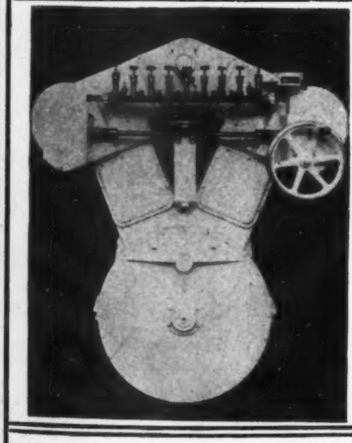


ELECTRIC STARTING, REVERSE GEAR MODELS are built in sizes 65 H.P., 4-cylinder; 100, 150, and 225 H.P., 6-cylinder; 300 and 450 H.P., 12-cylinder.

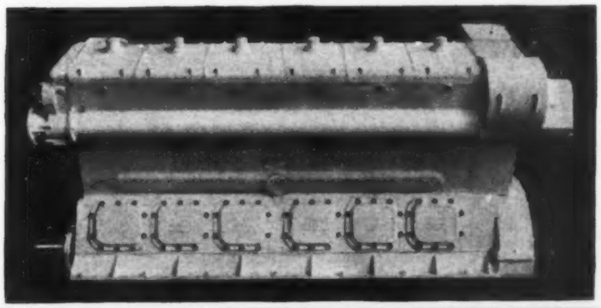


AIR STARTING AND AIR REVERSING MODELS are built in sizes 225, 300, 325, 500, 600, 700, and 1100-1500 H.P.—all 6-cylinder.





AIR STARTING AND AIR REVERSING 12 V-CYLINDER MODELS are built in sizes 450, 600, 750, 1000, 1200, 1400, and 2500—3000 H.P.



Treiber Diesel Engine Corp.

Dept. M. B. Camden, N. J., U. S. A. ✻ Cable Address: Deselmotor

Bulletins completely descriptive of the Treiber line of marine engines will be mailed upon request, without obligation. When writing please indicate size and type of engine in which you may be interested.

Drop Anchor at the

ROBERT BOSCH EXHIBIT

Booths 103-104
New York Motor Boat Show

SHOW-WARD bound seamen, yachtsmen, motor boat owners and others interested in the nautical, will find a whole ship load of interest at the Robert Bosch exhibit. Here are a few of the features every seafarer simply must see:

The Robert Bosch Super-Energy Magneto—it was meant to go to sea. It is designed so that water simply cannot penetrate. It introduces modern advantages combined in no other ignition system. The Graf Zeppelin is equipped with 20 of these magnetos—striking proof of its dependability.

The Robert Bosch Vibro-Balanced Horn—it's a boon to boats. It rules the sound waves. It thrives on salt air. It challenges wind, weather and water. Be sure to see the new chromium plated horn—it's a beauty!

The Robert Bosch Pyro-Action Spark Plug—it defies spark plug paralysis, the most common cause of plug troubles on boats. The result is more power for a longer period of time than you have ever known before.

These are only a few of the Robert Bosch Products you will find at Booths 103-104. If you're not coming to the Show, let us send our part of it to you... write for the new Robert Bosch Catalog for motor boats.

ROBERT BOSCH MAGNETO CO., Inc.
3603C Queens Boulevard, Long Island City, N.Y.

Robert Bosch
PRODUCTS

All Robert Bosch Products bear the full name "ROBERT BOSCH" and this trademark . .

YACHTS AS AIDS TO BUSINESS

(*Continued from page* 155)

Many fine diesel engined yachts have been constructed during the past year. The list which follows, includes practically all of the season's worthwhile craft and the information given includes owner, engine builder, designer and constructor:

Klahanee, Lucius M. Wainwright, Speedway, Tams & King, Consolidated.
Solana, W. C. Robinson, Speedway, Consolidated, Consolidated.
Acania, Arthur E. Wheeler, Winton, John H. Wells, Pusey & Jones.
Vara, Harold Vanderbilt, Treiber, Purdy, Herreshoff.
Albatross, John H. Wheeler, Jr., Cummins, Humphreys, Humphreys.
Alone, Harrison H. Boyce, Winton, Wm. Atkin, Chute & Bixby.
Comoco, R. W. Judson, Bessemer, H. J. Gielow, Lawley.
Crusader, A. K. Macomber, Sulzer, C. E. Nicholson, Camper & Nicholson.
Paradise, R. M. Searle, Cummins, Humphreys, Humphreys.
Paragon, C. J. Davol, Winton, A. L. Swasey, Bath Iron Works.
Anabas, Wardell Jones, Hill, Humphreys, Humphreys.
Cambriona, W. O. Briggs, Winton, Cox & Stevens, Pusey & Jones.
Buddy Boy, J. C. Mullender, Cummins, Fellows & Stewart, Fellows & Stewart.
Dream Girl, J. C. Roberts, Winton, Mathis, Mathis.
Elda, Arthur V. Davis, Winton, Cox & Stevens, Defoe.
Jonathan II, W. J. Butterfield, Cummins, Humphreys, Humphreys.
Jonathan III, H. Barber, Buda, Humphreys, Humphreys.
Lethargy, H. C. Kresge, Hill, Humphreys, Humphreys.
Rowena II, J. W. Hiltman, Standard, W. E. Bunce, W. E. Bunce.
Westward, L. C. Coggan, Cummins, R. E. Winslow, Harvey Gamage.
Olive K, C. F. Kettering, Winton, Wells-Cox & Stevens, Defoe.
Percianna II, Percy L. Hance, Winton, J. M. Densmore, J. M. Densmore.
Nirvana IV, H. Struckmann, Winton, N. Y. Y. L. & E. Co., N. Y. Y. L. & E. Co.
Yoreda, Aaron DeRoy, Bessemer, H. S. Defoe, Defoe.
Wayfarer, Winthrop W. Aldrich, Bessemer, Gielow, Lawley.
Wanderer, Geo. Whitney, Bessemer, Gielow, Lawley.
Queen Tyi, Arthur Crisp, Standard, Alden, Morse.
Raemere, DeWitt Page, Winton, Mathis, Mathis.
Colmena, Jules S. Bache, Winton, Wells, Jacob
Migrant, Carll Tucker, Bessemer, Gielow, Lawley.
Thalia, Thomas M. Howell, Winton, Tams & King, Defoe.
Saga, Chas. S. Payson, Winton, Cox & Stevens, Peterson.
Avalanche, Anson W. Hard, Winton, Tams & King, Consolidated.
Hi Esmaro, H. E. Manville, Bessemer, Gielow, Bath.
Poule D' Eau, F. H. Goodyear, Bessemer, Gielow, Lawley.
Sunshine III, Harvey W. Harper, Winton, N. Y. Y. L. & E. Co., N. Y. Y. L. & E. Co.
Lotosland, Col. E. A. Deeds, Winton, Cox & Stevens, Pusey & Jones.
Althea, Haywood Murphy, Bessemer, Gielow, Bath Iron Works.
Camargo, Julius Fleischman, Bessemer, Gielow, Geo. Lawley.
Bonhomie, R. C. Roebling, Bessemer, Gielow, Bath Iron Works.
Traveler, Geo. L. Craig, Bessemer, Craig, Craig Shipbldg. Co.
Marnell, M. H. Allworth, Cooper-Bessemer, John H. Wells, Defoe Boat & Motor Works.

DR. MAYBACH DEAD

Dr. Wilhelm Maybach, founder of the Maybach Motor Company and head of the Daimler Motor Company, died on December 29 at Stuttgart, Germany, at the age of eighty-four.

Dr. Maybach built the first Mercedes automobile in 1900. After founding a plant for airplane motors at Friedrichshafen, he developed the 12-cylinder Maybach motor which powered the Graf Zeppelin on her Trans-Atlantic flight.

He was born in Heilbronn, Germany, and in 1872 became head of the construction department of the Deutz Gas Engine Works, then managed by Daimler. In this connection Maybach brought out several outstanding improvements. In 1874 he designed a benzine-driven engine. His next important invention was a system of hot tube ignition after which Daimler brought out his differential gear and two and four-cylinder engines.

In 1890, Dr. Maybach started in business for himself and brought out one of the most valuable inventions, the spray carburetor. Following this he took over the technical management of the Daimler Motor Company, in which capacity he contributed many new improvements on the automobile, such as improved axle construction, the gate gear-shift, the steel frame and the flywheel ventilator.

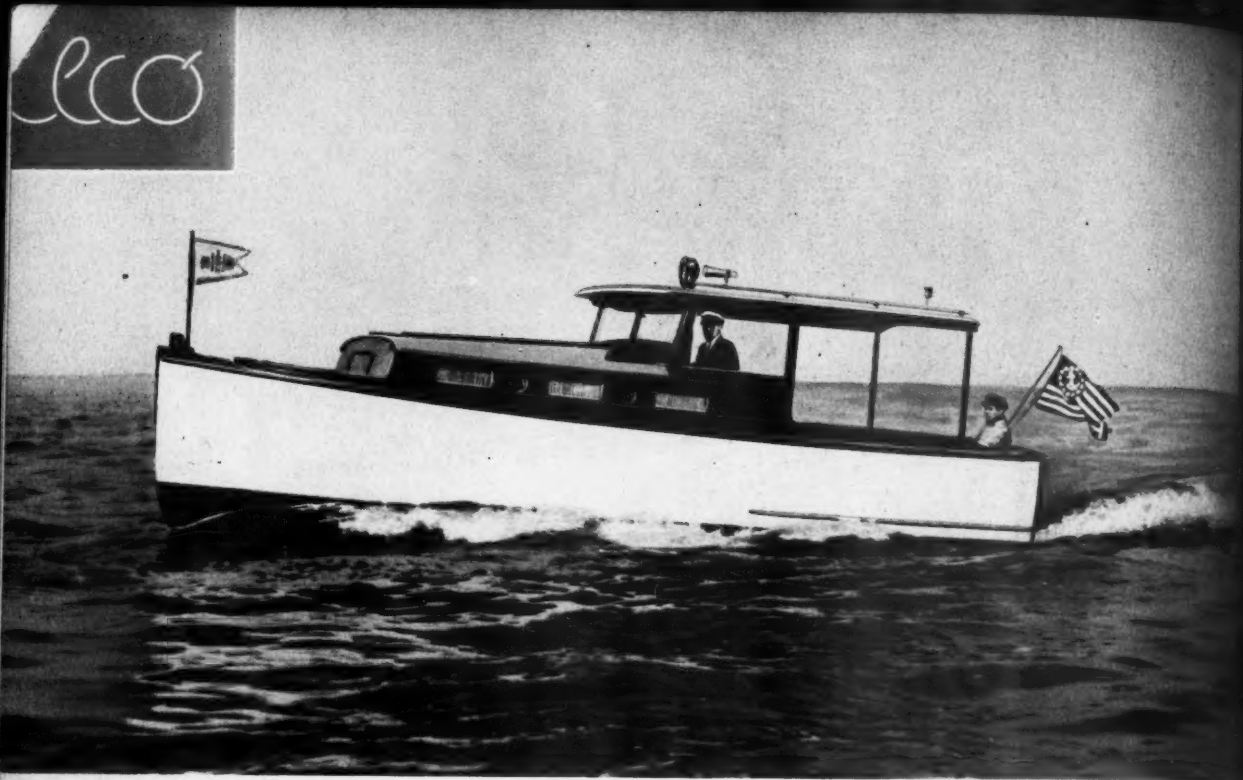
On Daimler's death in 1900, Dr. Maybach took over the management of the Daimler factory. He retired in 1907, but two years later resumed work on the Zeppelin motor.

Elco

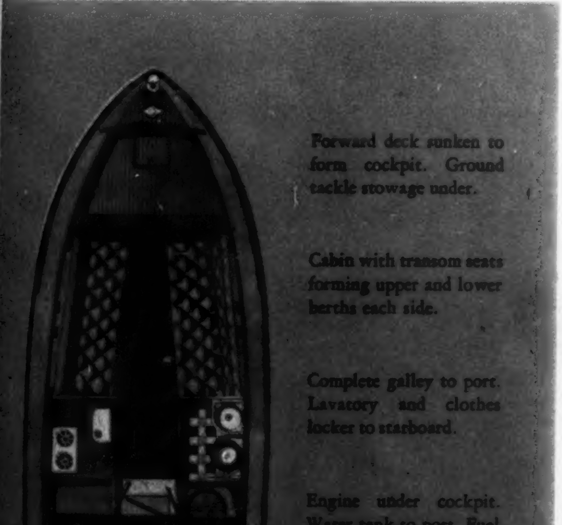
1930

FLEET

elco



THE NEW ELCO 27 MARINETT

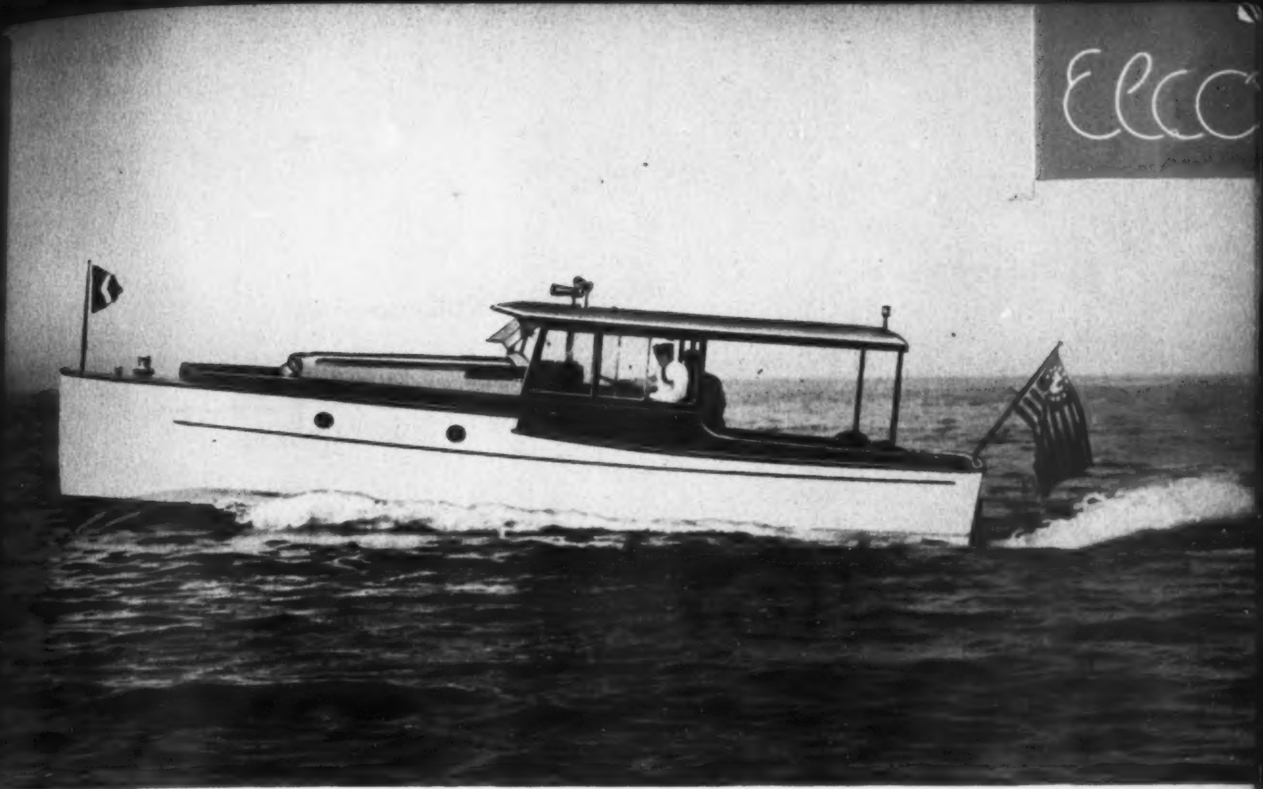

Forward deck sunken to form cockpit. Ground tackle stowage under.
Cabin with transom seats forming upper and lower berths each side.
Complete galley to port. Lavatory and clothes locker to starboard.
Engine under cockpit. Water tank to port. Fuel tank, Elco safety type, to starboard.
Large cockpit protected by windshield and awning.
Sunken after deck forming seat.

THIS new Elco is a home afloat for four people— endless source of recreation and pleasure—a wel built hull—a sturdy power plant—all that anyo could ask in twenty-seven feet of cruising mo boat, and at a price that is lower than the cos a good car That is what the Elco Twenty-Seven Fo Cruiser offers

Her specifications in brief are—length 26′ 9″, beam 9′ draft 2′ 4″. Keel and frames white oak—planking wh cedar, bronze screw fastened—exterior and interior t mahogany—decks mahogany— cabin top and awning can covered—metal work bronze, brass and galvanized iron finish, underbody antifouling, topsides white, roof buf trim varnish. New trunk cabin design—sunken forwa deck forming bow cockpit. All workmanship and mater conforming to Elco standards.

Large main cockpit with permanent awning and s aft—windshield with side wings—weather-proof side c tains. Cabin sleeps four—wide transom berths, spr cushioned—seat backs forming upper berths—5′ 9″ he room—hanging and stowage space for clothes. Separa lavatory, completely equipped. Galley with two-burn stove, sink, ice-box, shelves, food stowage, dish rack a cutlery drawer. Fresh water capacity 50 gallons.

Elco-Gray engine under cockpit floor—six-cylinder— H. P.—speed 10-11 miles per hour—fuel capacity 50 gall —cruising range 125-200 miles. Controls centered at ho zontal wheel for owner operation. Complete details f nished on request for Catalog MBS 27.



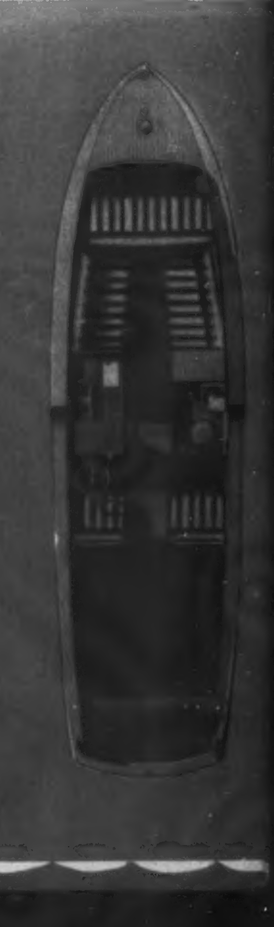
THE ELCO 30 VEEDETTE

A SPORTY combination of cruiser and runabout—speed and dash combined with shelter and a good cabin. An ideal day and week-end cruiser—staunch and seaworthy—roomy and comfortable. Speed to cover many miles in a day. A cabin for four over night, and perfect shelter. The type of boat for a man who does not want to make extended cruises, but wants the comforts and conveniences of a cabin boat coupled with good speed.

Length 30′ 11″, beam 8′ 6″, draft 2′ 4″, V-bottom type. Keel and frames white oak—planking white cedar, bronze screw fastened—exterior and interior trim mahogany—decks mahogany—cabin top and awning canvas covered—metal work brass and bronze—finish, underbody antifouling—topsides yacht white—decks varnish and buff—trim varnish.

Roomy cockpit with lazy seat aft and permanent awning, Elco safety fuel tank under—raised bridge seats with runabout wheel and controls—windshield with long side wings—forward cockpit reached from cabin. Sleeps four—spring-cushioned transoms and upper berths, 6′ 1″ headroom, separate fully equipped lavatory—galley with two-burner stove, ice-box, sink, drawer and shelves. Fresh water capacity 45 gallons.

Elco-Buda engine under steering position—six-cylinder—80 H. P.—speed 18-20 miles per hour—fuel capacity 75 gallons—cruising range 185-275 miles—controls at automobile wheel, for owner operation. Complete details furnished on request for Catalog MBS 30.



Forward deck, water tank and ground tackle locker under.

Bow cockpit seating four, hatch to cabin.

Cabin with full headroom. Transom seats form upper and lower berths each side.

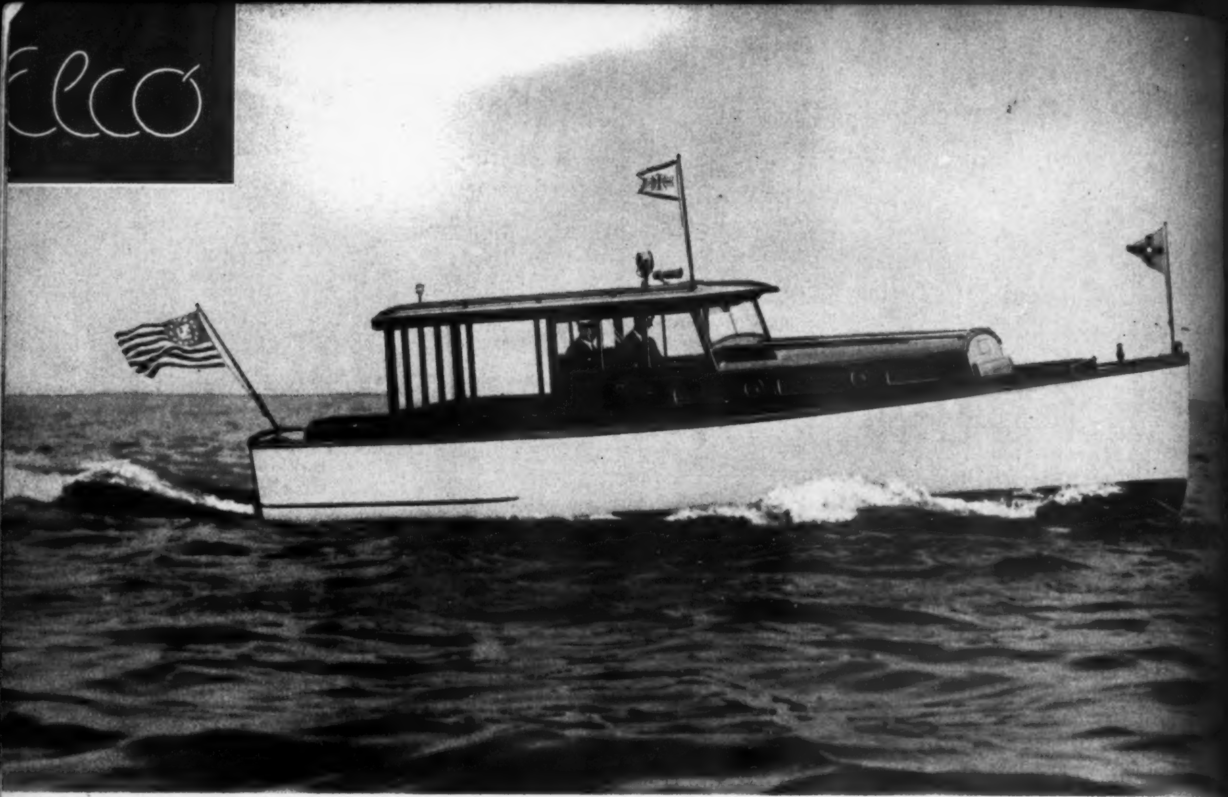
Complete galley to port. Separate lavatory to starboard.

Enclosed steering position with high seats and runabout wheel. Engine under hatches.

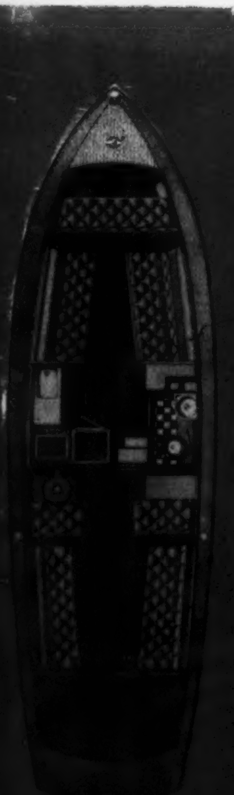
Cockpit protected by permanent awning, side curtains and windshield. Space for chairs.

Seat on sunken deck, storage and rudder gear under

Elco



THE NEW ELCO 35 CRUISETTE

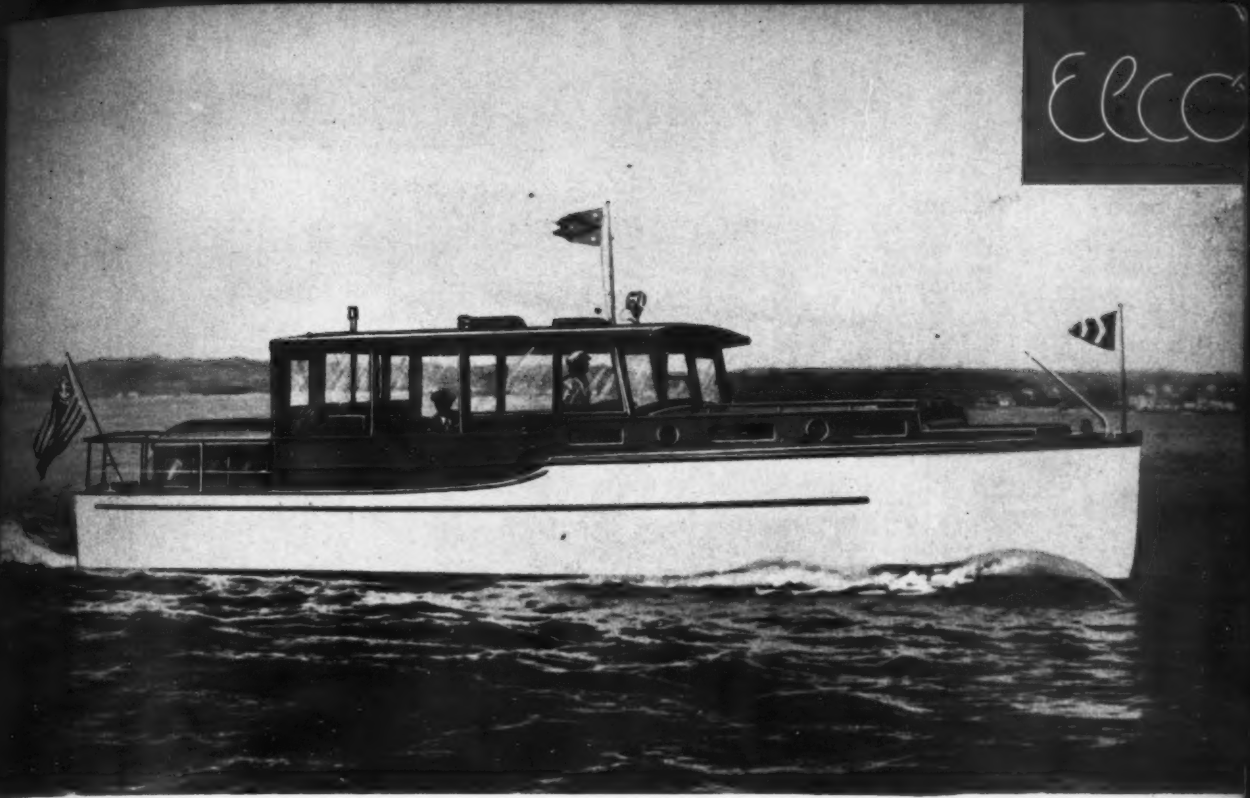

Bow deck, water tank and rope locker under.
Forward cockpit accessible from cabin.
Cabin with transom seats forming upper and lower berths each side.
Galley to port. Clothes locker and lavatory to starboard.
Enclosed steering position, engine under.
Cockpit with seats forming berths each side. Elco safety fuel tanks under. Can be open, screened or enclosed at will.
Open cockpit with stowage under.

FOR fourteen years constant improvements
been made in the design of Elco Cruisettes. In
new 1930 thirty-five foot model, yachtsmen
recognize the most highly developed small p
ure craft in the world. Comfortable, seawo
and with excellent speed, she is now, more than ever,
ideal boat for average requirements.

Length 35′, beam 10′ 3″, draft 2′ 9″. Keel and fra
white oak—planking white cedar, bronze screw fasten
cabin trunk and trim mahogany—decks mahogany—
top and awning canvas covered—metal work bronze,
and galvanized iron—finish, underbody antifouling,
sides yacht white, decks varnish and buff—trim varn

The cabin sleeps four—transom berths spring cushio
—seat backs forming upper berths—6′ 1″ headroom. L
tory—clothes lockers, large ice-box, lockers, dish
cupboard, shelves and drawers. Fresh water capacity
gallons. Main cockpit with permanent side seats
steering and observation seat raised; protected by pe
nent awning, and windshield with side wings. Coc
may be fully enclosed or screened at will to glassed b
head at stern. Two additional berths formed by exte
side seats. Bow cockpit—reached from cabin. Open coc
at stern.

Elco-Buda engine under hatches—six cylinder—120 H
—speed 15-16 miles per hour—fuel capacity 120 gallo
cruising range 150-225 miles. All controls at automo
wheel for owner operation. Complete details on request
Catalog MBS 35.



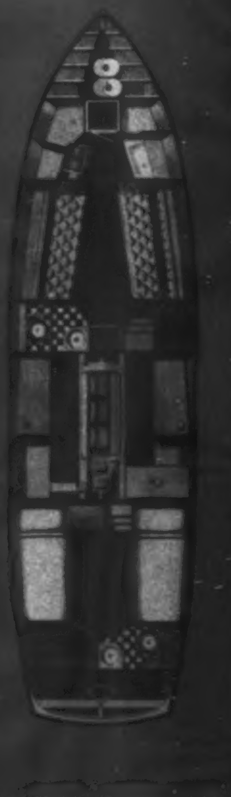
THE NEW ELCO THIRTY-EIGHT

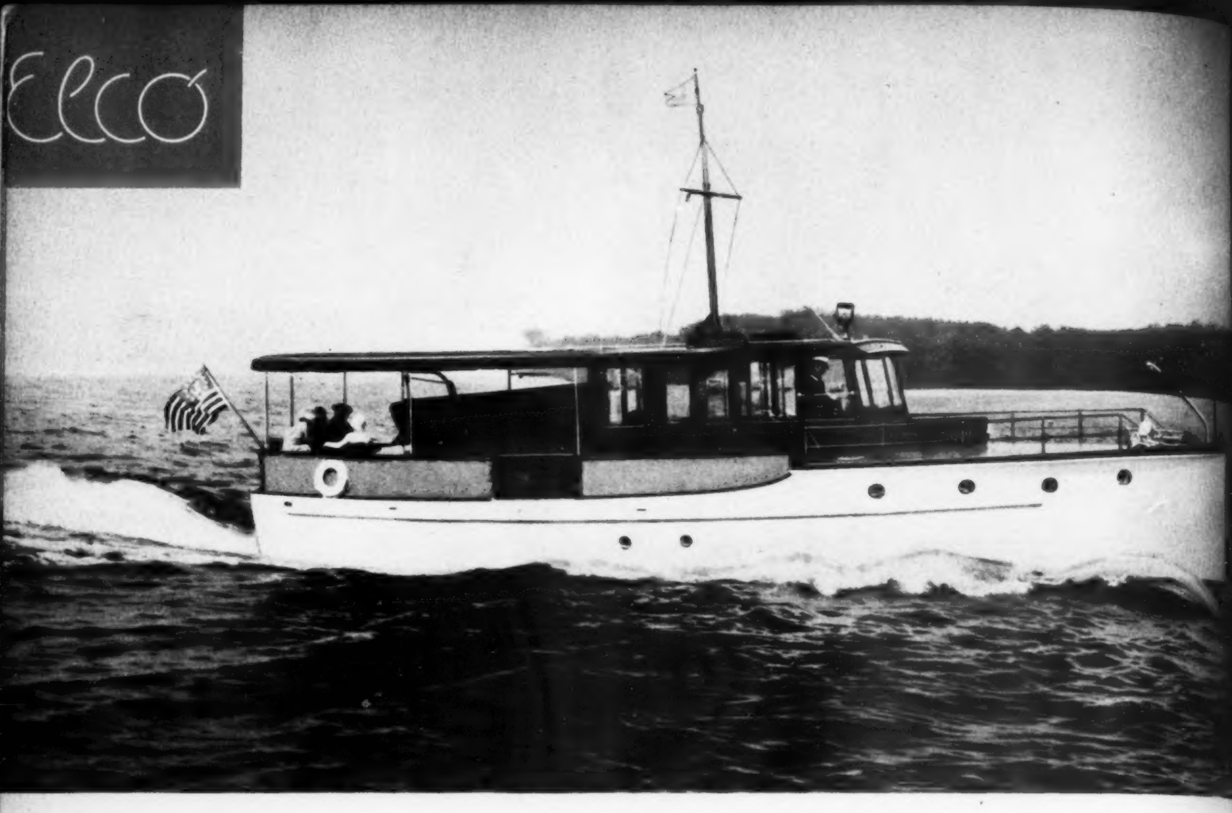
THE New Elco Thirty-Eight was designed to meet the requirements of the yachtsman who wishes to run his own boat and yet have the convenience and luxury of two separate cabins. In addition, she has a large bridge deck which is convertible to a deck-ouse at will.

Length 38′, beam 10′ 5″, draft 2′ 10″. Keel and frames hite oak—planking white cedar, bronze screw fastened—bin trunks and trim mahogany— decks canvas covered—etal work bronze, brass and galvanized iron—finish, nderbody antifouling—topsides yacht white—decks buff -trim varnish.

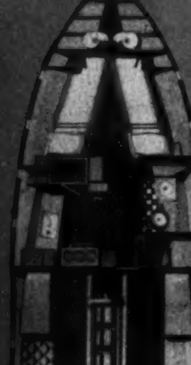
Bridge deck with divan seat and space for chairs—pro-cted by permanent awning, windshield with long side ings and sliding screen and solid panels for complete en-osure at will—after deck enclosed by rail. Forward main bin sleeps four—headroom 6′ 1″. Complete lavatory. Well-quipped separate galley in bow with two-burner and oven s stove, sink, ice-box, lockers, drawer and dish racks. mple stowage space for clothes. Water capacity 85 gal-ns, pressure supply. Separate stateroom aft—two berths ith springs and mattresses—private lavatory—bureau and rge clothes locker. Forward cockpit reached from galley d deck.

Elco engine under bridge deck—six-cylinder—125 H. P. -speed 14-15 miles per hour—fuel capacity 170 gallons. ruising range 185-275 miles. Controls at wheel for owner peration. Complete details furnished on request for Cata-g MBS 38.


Rope locker, stove gas tank stowage.
Bow cockpit over complete galley with stove, ice box, sink, etc.
Main cabin with transom seats forming upper and lower berths each side.
Lavatory to port. Clothes locker to starboard.
Engine room under bridge deck, which is convertible to enclosed deckhouse. Elco safety fuel tanks.
Stateroom with two berths and bureau.
Clothes locker to port. Lavatory to starboard.
Stowage under after deck.



THE ELCO FORTY-TWO


Rope locker. Stove gas tank stowage.
Double stateroom, two high berths, lockers, dresser.
Complete galley to port. Lavatory to starboard.
Engine room under deckhouse. Safety fuel tanks.
Berth for hand. Full headroom. Hatch to deck.
Lavatory with shower to port. Lockers to starboard.
Double stateroom with two berths and bureau.
Water tanks and stowage under after deck.

IN THIS handsome deckhouse cruiser, the com and luxury of a modern yacht are combined w the economy and moderate size of the cru Requiring only one paid hand for upkeep, furnishes owner's quarters comparable to th found on much larger boats, both in size and appointme

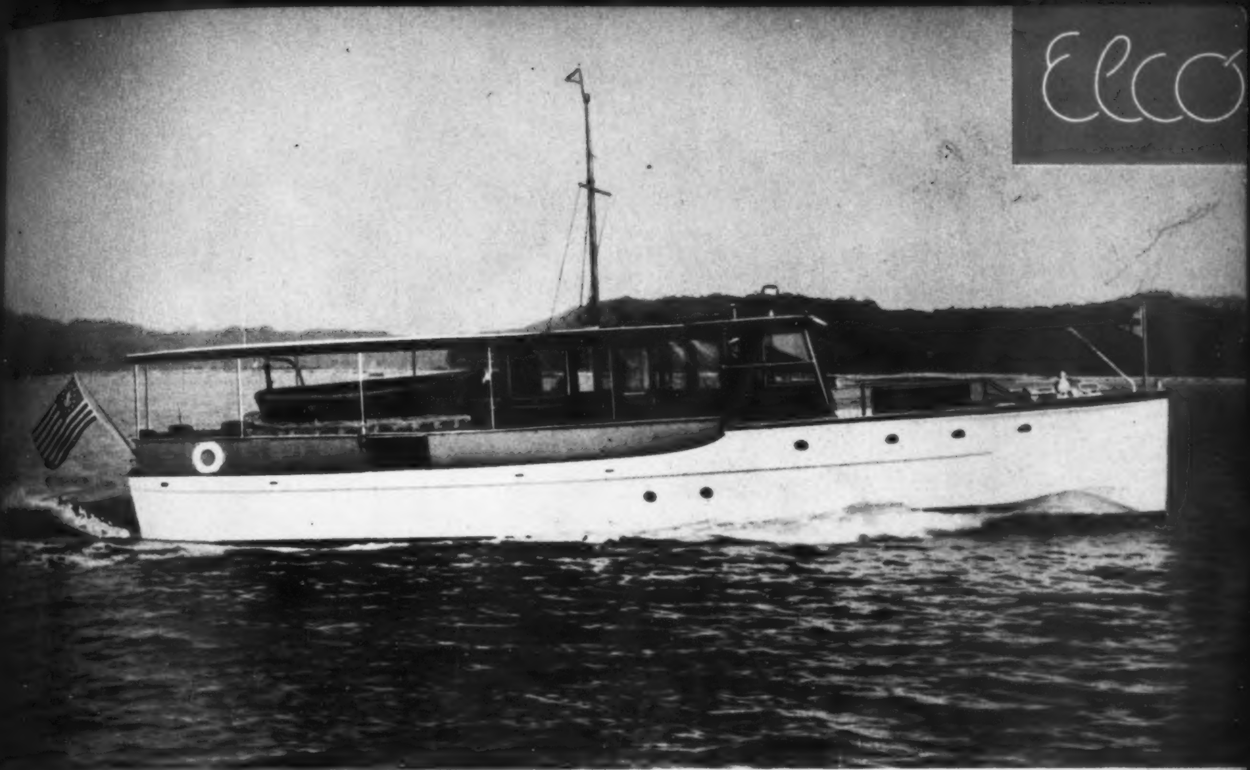
Length 42′ 9″, beam 11′ 11″, draft 3′ 0″. Keel and fra white oak—planking white cedar, copper riveted—de house, cabin trunk and trim mahogany—decks can covered forward, varnished pine aft—metal work bro brass and galvanized iron—finish, underbody antifouli topsides white, decks buff and varnish, trim varnish.

Deckhouse with sliding windows—divan seat form extra double berth. Main deck sheltered by perman awning and protected by rail. Double stateroom forw with two permanent berths, dresser and hanging lock Galley with gas stove and complete fittings—port, lavatory opposite at foot of forward companion. Eng room under deckhouse with quarters for paid hand— headroom in after part—access from deck and forw passage. After stateroom with two berths, bureau, la hanging locker and private lavatory with shower. Fr water capacity 150 gallons, pressure supply.

Dinghy, 9½-foot lap strake, cedar and mahog carried on after cabin trunk, with davits and gear.

Elco engine—six-cylinder—125 H. P.—speed 12-13 m —fuel capacity, 200 gallons—cruising range 185-275 m —wheel and controls in deckhouse. Complete details f nished on request for Catalog MBS 42.

Elco



THE ELCO FIFTY

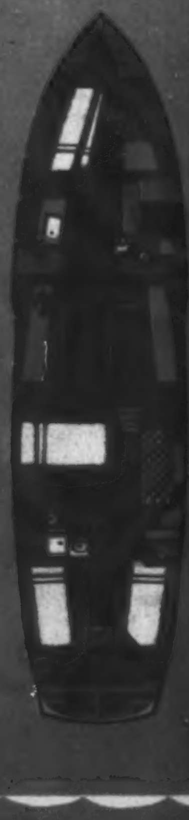
THE Elco Fifty represents the highest development of the small motor yacht. She combines every luxury of a large vessel with the economy of moderate size and a crew of but two men. She is seaworthy, fast, beautiful.

Length 50′ 4″, beam 12′ 9″, draft 3′ 0″. Keel and frame ak—planking cedar, copper riveted—deckhouse, trunk, nd trim mahogany—decks canvas forward, varnished aft —metal work bronze, brass and galvanized iron—finish, nderbody antifouling, topsides white, decks buff and arnish, trim varnish.

Large deckhouse with sliding windows—divan seat orming extra berth; table and desk. Main deck sheltered y permanent awning and protected by rail. Crew's uarters forward—forecastle with two berths, lockers, seat, able and hatch to deck—complete galley with gas stove nd large food storage capacity—lavatory. Engine room nder deckhouse. Owner's quarters aft—two staterooms, ne with double berth and one with two single berths, each ith bureau and hanging lockers. Extra berth and lockers n lobby. Bathroom complete with shower. Fresh water apacity 220 gallons, hot and cold, pressure supply.

Dinghy, 11-foot lap strake, cedar and mahogany—arried on after cabin trunk, with davits and gear.

Two Elco engines—six-cylinder—125 H. P. Speed 14-15 iles per hour—fuel capacity 350 gallons—cruising range 85-275 miles. Wheel and controls in deckhouse. Indeendent generating set and batteries for lighting. For comlete details request Catalog MBS 50



Cable locker, stove gas tank stowage.

Forecastle, two berths, lockers and bureau. Hatch to deck.

Complete galley, skylight over. Lavatory to starboard.

Engine room, under deckhouse, safety fuel tanks and generating set.

Stateroom with double berth to port. Berth in lobby.

Bathroom to port. Lockers to starboard.

Stateroom, with two berths and bureau.

Water tanks and stowage under after deck.

37 YEARS OF EXPERIENCE ARE BUILT INTO EVERY

Elco

Motor Boat. The opening of each succeeding yachting season marks the beginning of another passage in Elco's historical cruise. Dangers and difficulties of the past voyage have been overcome and the channel broadens to wider horizons on either hand. Established in 1892, The Elco Works first exhibited standardized boats at the Chicago World's Fair. Since then the Elco principle of standardized construction has developed the building of better boats at lower cost. Thousands of Elco owners benefit through perfected details of design and construction not found even in expensive specially built craft; and their pleasure and recreation cost them far less in money and effort. Every Elco owner has confidence that his boat will carry him over thousands of sea miles of happiness.

KERMATH
MARINE ENGINES
the utmost in quality
· · A · KERMATH · ALWAYS · RUNS · ·

15

MATCHLESS MODELS

There is a Kermath to fit every type and size of boat – Yours!

THE birth of a brand new boating season brings to thousands the problem of selecting the proper power plant for either pleasure or work or both.

So I want to address an introductory word to this vast army of boating enthusiasts and tell them something about the inherent goodness—honest worth and 20th Century engineering refinements of the world famous line of Kermath marine engines.

The wide range of Kermath models from the huge super performer 200 H.P. masterpiece down to the highly economical, clean cut, dependable 2 cylinder group—represents the seasoned experience of one organization of experts who have built marine engines exclusively for 21 years.

Kermath engineering laboratories and research facilities are probably the most complete in the industry. Kermath enjoys every means of procuring precise scientific data which insures the production of the most advanced designs on the market.

In addition, the painstaking testing of the various power plants in the exact hulls for which they are intended demonstrates positive engine actions under practical workaday conditions.

Such exhaustive experiments provide a wealth of definite facts upon which we compute motor possibilities from a power and long life standpoint. Thus when you select a given Kermath of a given horsepower to do a given job, you can depend on that engine to do just what we say it will under the most adverse conditions.

For Kermaths are built to do their best against the toughest circumstances.

This all too brief foreword explains the basis of developing Kermath speed, power, economy and operating efficiency which tens of thousands of Kermath owners swear by.

It is such a policy which has placed Kermath in its premier position in the marine industry. It is such a policy that has established Kermath world wide recognition and acceptance.

And it is such a policy which I believe merits your confidence and your patronage.

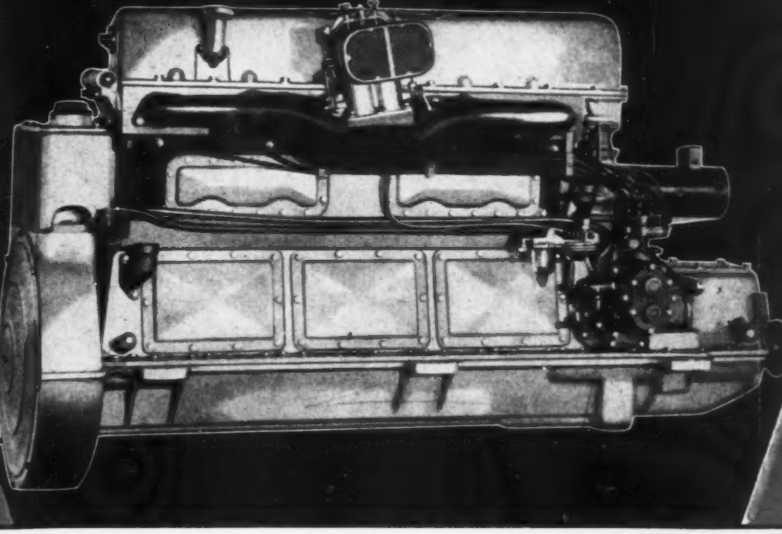
Once a Kermath owner always a Kermath owner has become a fixed byword in the marine field.

Send today for our complete new catalog covering the complete Kermath line.

President

KERMATH MANUFACTURING COMPANY
5879 Commonwealth Avenue
Detroit, Michigan

KERMATH



—and now the new 200 America's Ace of Action

Again Kermath blazes a new trail in presenting a more highly refined super power marine engine.

No other engine in the world but this "200" will provide equal rotative speeds or anywhere near equal power with the same cubic displacement.

Furthermore this 200 H. P. Six will turn equally as large a propeller at the same speed in large boats as engines having very much greater piston displacement.

At 2200 R. P. M. this model develops 220 H. P.

The wealth of new refinements with which the new Kermath 200 is literally covered should be carefully studied by every yachtsman.

There is a brand new design in down draft carburetion producing precision mixture—10% power increase. There is an Oil Cooler and Oil Filter of special Kermath design.

Overboard crankcase ventilation insures pure clean air on board always.

And the electrical system is all new, redesigned by Delco. This was special for Kermath, built to Kermath's own specifications.

But you must have all the facts. No one but Kermath offers such a phenomenal performer — a masterpiece of advanced engineering. Write for special and complete information today.

SPECIFICATIONS

Speed—1800 to 2200 r.p.m.

Bore 5", stroke 5¾". Displacement, 678 cubic inches. Cast en bloc.

Carburetor—Holley downdraft.

Oiling System—Completely full pressure feed, dry sump type. Special Oil Filter and Cooler attached to oil tank mounted on flywheel housing.

Ignition—Double synchronized Delco battery ignition with double breaker bars and double condensers.

Starting Motor—Delco 12-volt.

Storage Battery—Willard 12-volt.

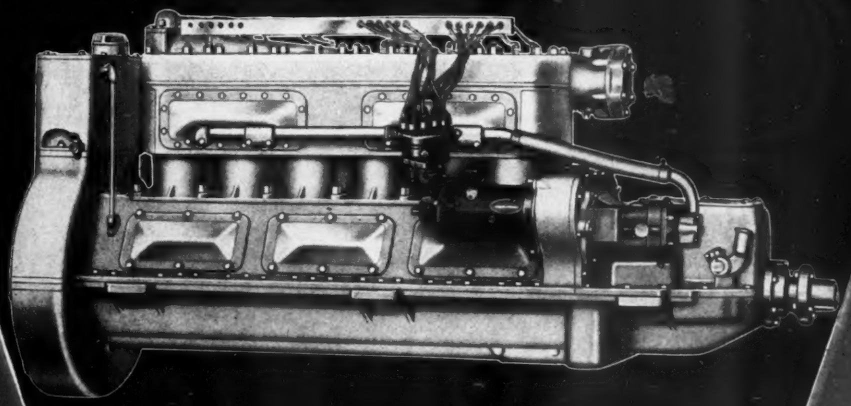
Crankcase—Oil pan and gear cover all of aluminum.

Size—Length 66-⅝", height 38-⅛". width 21-5-16".

Weight Complete—1350 lbs.

Salt Water Equipped.

KERMATH



The celebrated 150 L-Head Ideal for Cruiser or Runabout

The 150 is the Big Boy of its class. Yes and here IS class. As distinctive as a piece of delicate Swiss mechanism—as rugged as a brute siege Howitzer.

For light fast cruisers and runabouts here is a new standard of Six Cylinder performance. And WHAT a list of features, many of which you never expected to get in a model at this price. For instance—down draft carburetion—high torque or pull at approximately 1000 R. P. M., on the low speed model and plenty of pep at 2200 R. P. M., for the high speed model—large crankshaft set in extra large main bearings—force feed lubrication to all rotating parts—oil cooler—5"Bore—5¾"Stroke for power development—dual ignition—an oil filter which means thousands of extra running miles.

While rated as a 150 H. P., this engine in the high speed model develops 185 H. P., at 2200 R. P. M.

SPECIFICATIONS

150 H. P. L-Head

Speed—1600 to 2000 r. p. m., suitable for both medium duty and high speed. (Medium duty should be specified when desired.)

Bore—5", stroke 5¾". Displacement 678 cubic inches. Cast en bloc.

Oiling System—Oil filtered, full pressure feed, dry sump type. Oil screening, and changing all done in oil tank mounted on flywheel housing.

Ignition—Double synchronized Delco battery ignition with double breaker bars and double condensers.

Starting Motor—Delco 12-volt.

Storage Battery—Willard 12-volt.

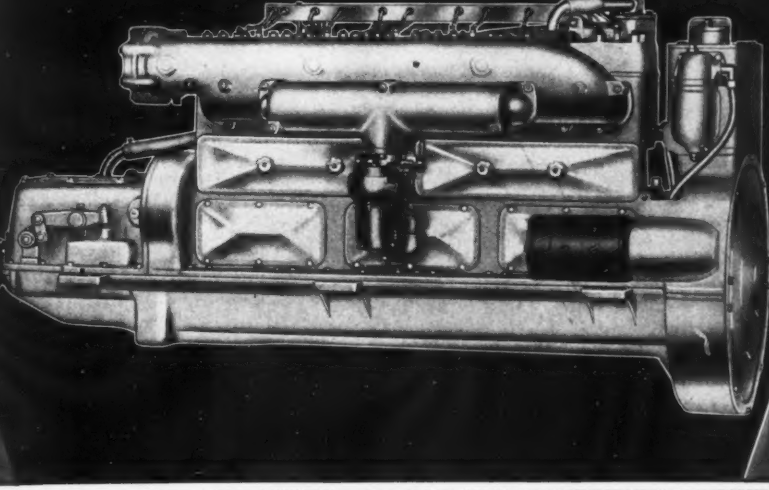
Crankcase—Oil pan and gear cover all of aluminum.

Size—Length 66⅝", height 38⅛", width 21-5/16".

Weight Complete—1340 lbs.

Salt Water Equipped.

KERMATH



Maximum development of the Six at minimum price

The popular priced Six designed for smart cruisers and larger work boats reaches the pinnacle of perfection in the 85 and 125 H. P., L-Head Kermaths. Specially designed cylinder heads and refinements in manifolding are important aids in developing magnificent performance.

Perfected carburetion and manifolding, dual water pump, which multiplies the life of the average pump over eight times—special dual Delco marine ignition built to Kermath specifications—seven bearing crankshaft—Bohn Ring True Interchangeable Bearings—are but a few of the features. Truly an amazing list of refinements in a popular priced Six!

The 1930 models with improved camshaft and valve operating mechanism produce a sustained flow of power at high and medium speeds, snappy pickup and astonishing reserve power.

SPECIFICATIONS

125 H. P.

Speed—1600 2200 r.p.m.

Bore 4⅝", stroke 5⅛". Displacement 555 cubic inches. Cast en bloc.

Oiling System—Full pressure feed, dry sump type. Special Oil Filter attached to oil tank mounted on flywheel housing.

Ignition—Double synchronized Delco battery ignition with double breaker bars, double condensers and double coils.

Starting Motor—Delco, 12-volt.

Storage Battery—Willard 12-volt, 130 ampere hour.

Crankcase—Oil pan and gear cover of aluminum.

Size—Length 66⅝", height 33⅜", width 21¾".

Weight Complete—1235 lbs.

Salt Water Equipped.

85 H. P.

Speed—800 to 1400 r.p.m.

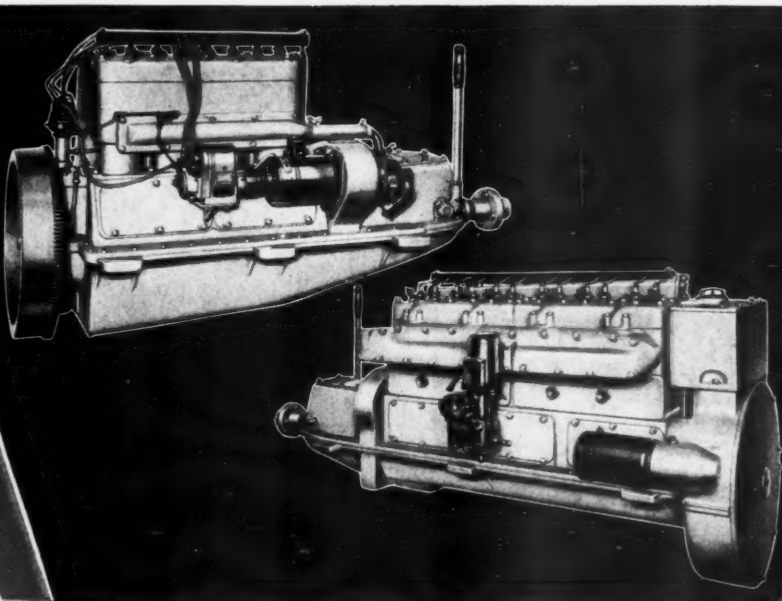
Crankcase—Oil pan and gear cover of close grained cast iron.

Size—Length 66⅝", height 33⅜", width 21¾".

Weight Complete—1570 lbs.

Balance of specifications same as 125.

KERMATH



Unusual Values in Big Fours and Medium Duty Sixes

The powerful rugged Kermath 4 cylinder 35 and 50 H. P. models are in a class entirely their own. Here is the Nation's best for rough every day going. Here is a series of power plants that squeeze the last ounce of operating energy out of the last drop of gasoline. A great favorite with fishermen, tug boat operators, also with cruiser and auxiliary owners.

For six cylinder smoothness, vibration freedom, abundant power and speed, the 65 and 100 H. P. Kermaths are ideal in every respect including the price, which makes these models downright Down East bargains. For when you consider the high quality, dependability and long life features of this Six, you can readily realize why they have been such prime favorites over a period of years with hundreds of owners.

Seven bearing crankshaft—extra large seven bearing cam shaft, full force feed lubrication—Bohn Ring True Interchangeable Bearings—all items of the finest quality in Six Cylinder practice.

SPECIFICATIONS

35 and 50 H. P.

Bore—4⅜".

Stroke—5½".

Speed—600 to 1200 r.p.m.

Displacement—330 cubic inches.

Lubrication—Pressure feed to all main bearings, connecting rod bearings, reverse gear bearings, crankshaft bearings and all gear shafts, etc., with gear oil pump submerged in oil.

Ignition—Bosch Magneto with impulse starter or Delco battery distributor, or both.

Electric Starter—Starter and generator complete with all wiring, switches, large size Willard Storage Battery.

Weight Complete—Model 35, 1010 lbs. Model 50, 790 lbs.

Salt Water Equipped.

100 H. P.

Speed—1500 to 1850 r.p.m.
Bore 4⅜", stroke 5½". Displacement 495 cubic inches.
Oiling System—Oil Filtered, full pressure feed, dry sump type. Oil screening and changing cone in oil tank mounted on flywheel housing.
Ignition—Double ignition. Bosch magneto complete with impulse coupling and Delco distributor.
Reverse Gear—Kermath with special ball bearing pilot and large double-row standard ball bearings on propeller shaft, having 26 one-half inch balls for radial and thrust load.
Starting Motor—Delco, Large Size.
Crankcase—Oil pan and gear cover all of aluminum.
Size—Only 66 5/16" in length.
Weight Complete—1205 lbs.
Salt Water Equipped.

KERMATH

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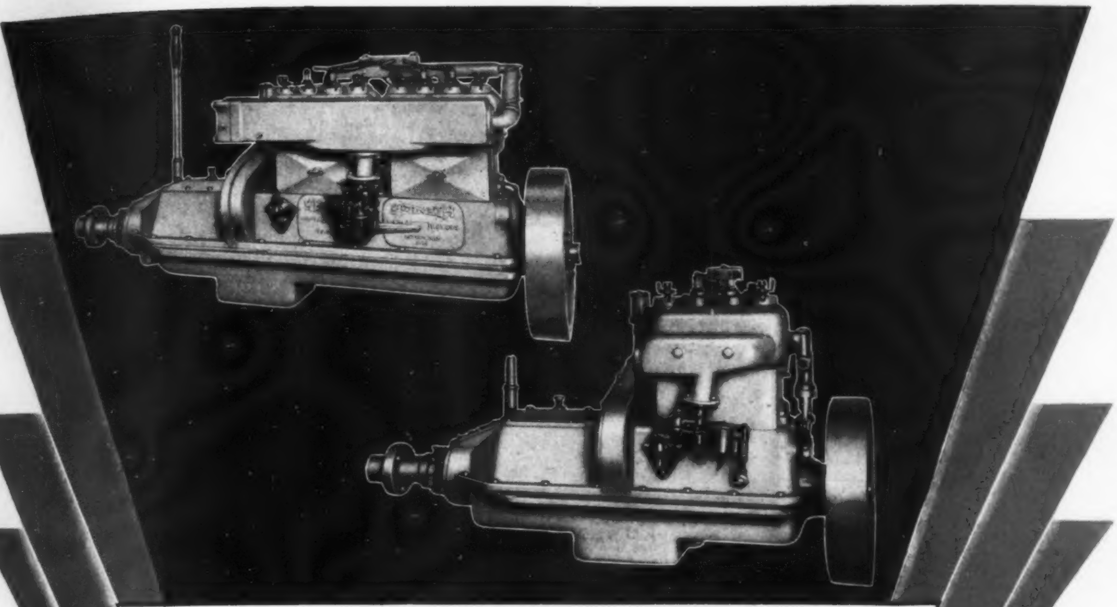


The most efficient series of small engines ever designed

The two cylinder 4-5, 6-8, 8-10, H. P. Kermaths have long life qualities designed right into their very core.

The 12-16 and 20 H. P. models are equally efficient.

For over 20 years (please let that sink in) these same 4 cylinder wonders have been giving splendid service.

The original models sold are still operating satisfactorily.

SPECIFICATIONS

8-10 H. P.

Bore—4".
Stroke—4".
Speed—600 to 800 r.p.m.
Oiling System—Splash system with plunger pumps lubricating all parts of motor.
Ignition—Bosch High Tension Magneto with impulse coupling. An extra charge is made for electric starter and generator.
Reverse Gear—Hardened and ground gears throughout, automatically lubricated.
Clutch—Five-plate adjustable clutch, lubricated through motor.
Size—Length overall 40 5-16".
Weight Complete—380 lbs.

20 H. P.

Bore—4".
Stroke—4".
Speed—600 to 1200 r.p.m.
Oiling System—Splash system with plunger pumps lubricating all parts of motor.
Ignition—Bosch High Tension Magneto with impulse coupling starter. An extra charge is made for electric starter and generator.
Reverse Gear—Hardened and ground gears throughout automatically lubricated.
Clutch—Five-plate adjustable clutch lubricated through motor.
Size—Length overall 51 13/16".
Weight complete with large flywheel—635 lbs.
Salt Water Equipped.

4-5 H. P.

Bore—3½".
Stroke—4".
Speed—600 to 800 r.p.m.
Balance of specifications same as 8-10 H.P.

6-8 H. P.

Bore—3¾".
Stroke—4".
Speed—600 to 800 r.p.m.
Balance of specifications same as 8-10 H.P.

12 H. P.

Bore—3⅛".
Stroke—4".
Speed — 600 to 1200 r.p.m.
Weight Complete—568 lbs.
Balance of specifications same as 20 H.P.

16 H. P.

Bore—3¾".
Stroke—4".
Speed — 600 to 1200 r.p.m.
Weight Complete—568 lbs.
Balance of specifications same as 20 H.P.

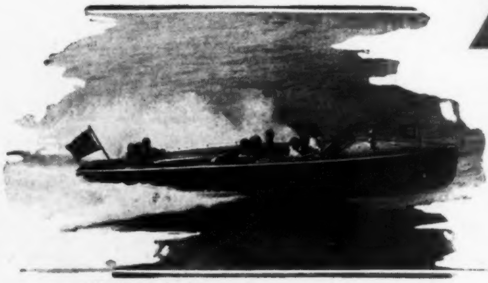
KERMATH

Dyer Motor Craft "Protest"
Powered by twin Kermath 200 H.P. engines.
Speed 28 to 30 miles per hour.

A Staples Johnson Cruiser
Powered by Kermath 200.
Speed 16 miles per hour.

"Duck Soup" A Banfield 32
Powered by Kermath 150 H.P.
Speed 28 to 30 miles per hour.

26-ft. "Dart" Runabout
Powered by Kermath 200 H.P.
Speed 42 miles per hour.



Hackercraft 30
Powered by 200 H.P. Kermath.
Speed 40 miles per hour.

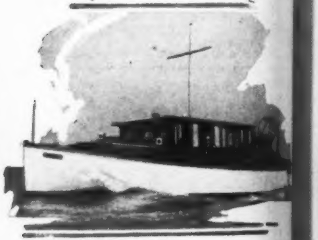
KERMATH

powered boats in a variety of types

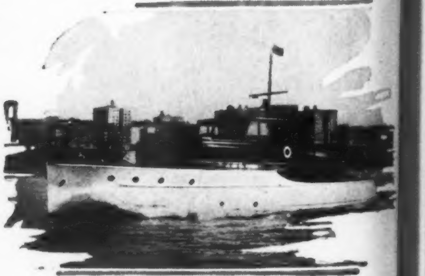
Chris Craft
Powered by Kermath 200 H.P.
Speed 42 miles per hour or better.

Gar Wood 26 ft. Runabout
Powered by Kermath 200 H.P.
Speed 27 miles per hour.

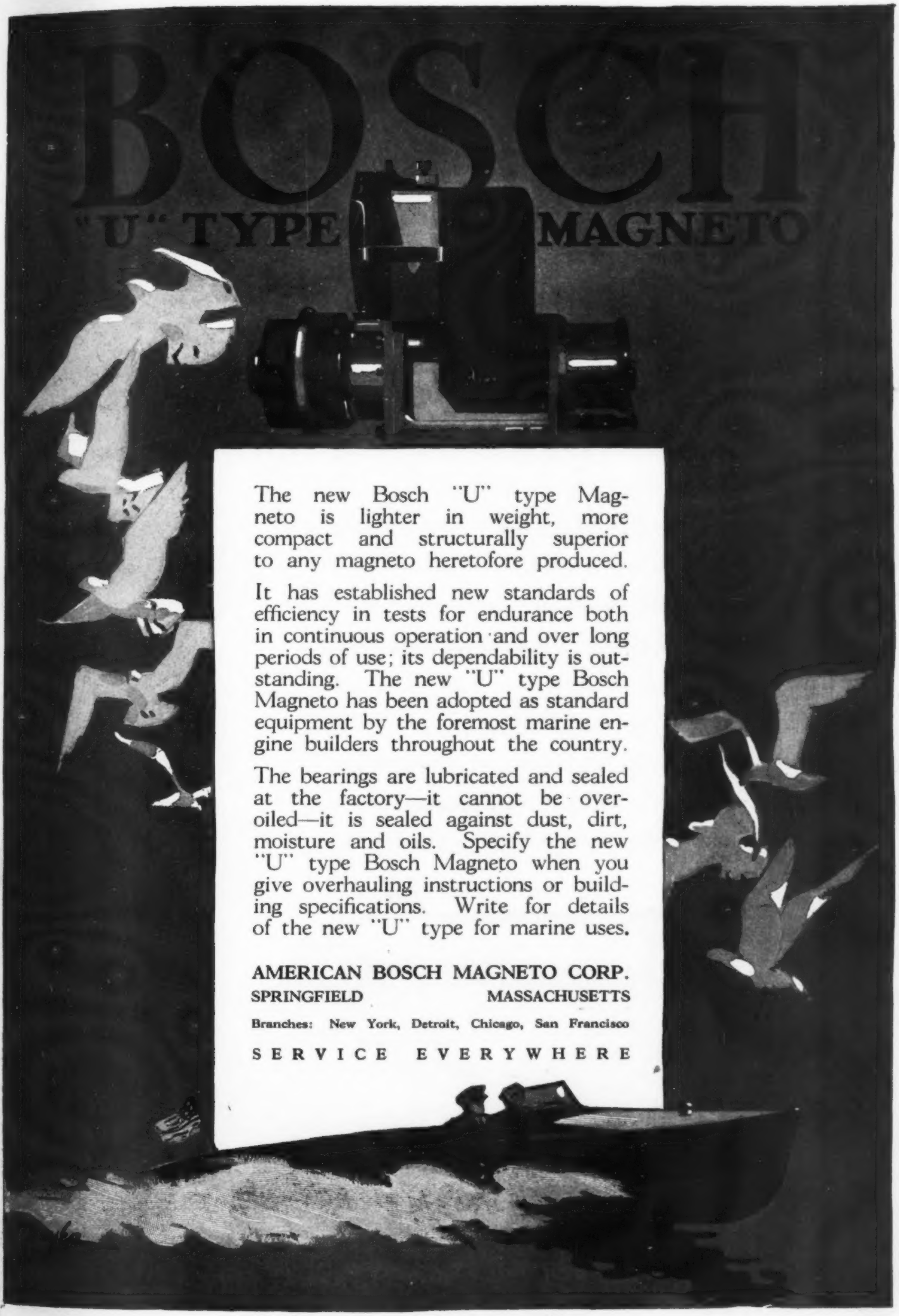
A Wheeler Superplaymate
Powered by Kermath 200 H.P.
Speed 27 miles per hour.



The Matthews 38
Powered by 125 H.P. Kermath
Speed 14 to 15 miles per hour.



A Fleetwing Cruiser
Powered by twin 150 Kermath L-Head engines.
Speed 14 miles per hour.



BOSCH "U" TYPE MAGNETO

The new Bosch "U" type Magneto is lighter in weight, more compact and structurally superior to any magneto heretofore produced.

It has established new standards of efficiency in tests for endurance both in continuous operation and over long periods of use; its dependability is outstanding. The new "U" type Bosch Magneto has been adopted as standard equipment by the foremost marine engine builders throughout the country.

The bearings are lubricated and sealed at the factory—it cannot be overoiled—it is sealed against dust, dirt, moisture and oils. Specify the new "U" type Bosch Magneto when you give overhauling instructions or building specifications. Write for details of the new "U" type for marine uses.

AMERICAN BOSCH MAGNETO CORP.
SPRINGFIELD MASSACHUSETTS
Branches: New York, Detroit, Chicago, San Francisco

SERVICE EVERYWHERE

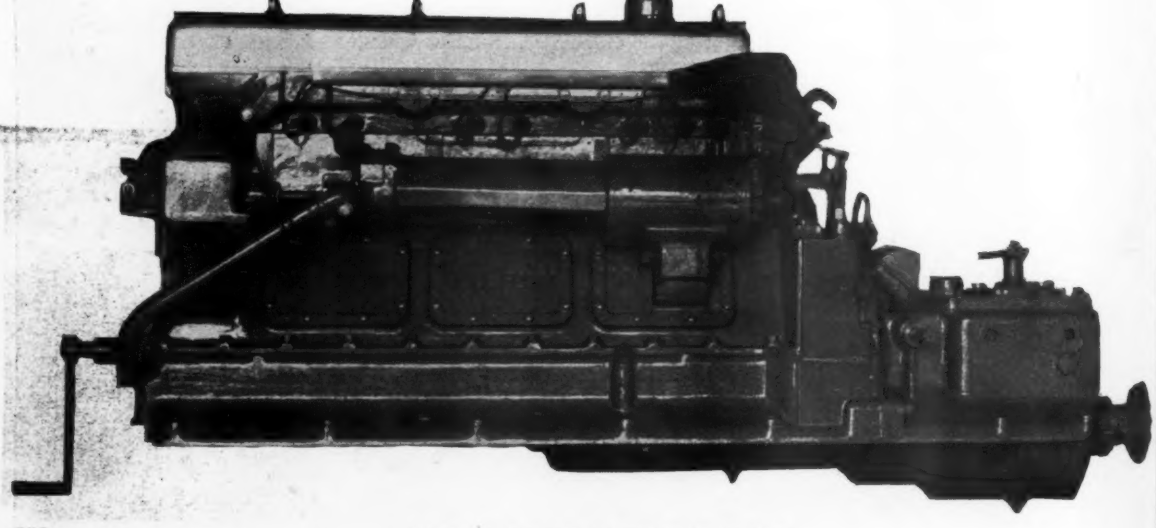
The engine deserves a lot more thought than it generally gets!

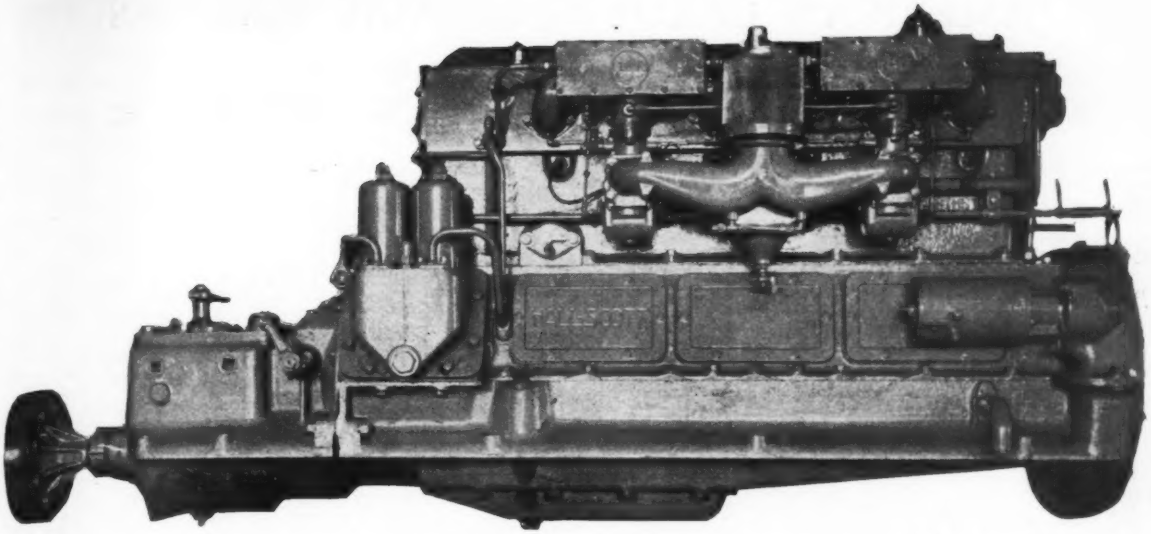
It's pretty general to take a boat's engine more or less for granted, but it's far too important to pass off so easily.

Your engine has to take you smoothly and uninterruptedly from one harbor to another . . . and it has to do a great deal more than that. It has to be able to carry you steadily through the heaviest weather . . . to pull through any emergency without a flicker. You may never have to call upon its utmost, but it has to be there for the *one* time when you need it!

Here are two engines which you can put into your boat and forget completely, except for a little care. They will serve you steadily and surely, in every weather, hour upon hour throughout the longest run you ever take. They have been built out of years of experience in engine building of every type, and they have proved—in faithful performance under all manner of conditions—that such an experience is able to build thoroughbreds.

The 6 cylinder HSR develops 100 horsepower and





is ample for ordinary cruiser duty. The HDR is a 6 cylinder engine for extremely heavy duty in large cruisers, and develops 175 horsepower. Both engines have the Hall-Scott in-built reduction gear, which delivers every ounce of the engine's power to the shaft with unbelievable smoothness and an almost total lack of vibration.

Of course, we will send you folders describing these engines in complete detail, but meanwhile, it will surely interest you to look over the engines yourself at one of the display rooms listed below.

When you write, will you please mention the type of the boat you now have, or may be building?

HALL-SCOTT
MARINE ENGINES

HALL-SCOTT MOTOR CAR COMPANY
Division of
American Car and Foundry Motors Co.
217 W. 57th Street, New York, N. Y.

Berkeley, California — Seventh Street and Heinz Avenue . . . New York City — A. C. F. Salon, 217 W. 57th Street . . . Detroit — A. C. F. Salon, 500 East Jefferson Avenue . . . San Francisco, California — S. C. Kyle, Rialto Building . . . Los Angeles, California — 210 East 10th Street . . . San Diego, California — R. V. Morris & Company — 836 Columbia Ave . . . Seattle, Wash. — 902 Western Avenue . . . Portland, Oregon — 344 Burnside Street . . . Vancouver, B. C. — Boeing Aircraft Co.

AMERICA'S LEADING MARINE ENGINES

(*Continued from page* 150)

MAKE & MODEL	Horse Power	Bore & Stroke	No. of Cyl.	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark Plugs	Carbu-retor
INTERNATIONAL New York, N. Y.											
16	16	3¾ x 4	4	1000	290	Spl	Joes	Bo	Bo	Bo	Sch
16	16-18	3¾ x 4	4	1200	290	Spl	Joes	Bo	Bo	Bo	Sch
JOHNSTON ROBERTS MOTORS, Sandusky, Ohio											
J	16	3¾ x 4	4	1200	285	Pr	....	....	AK	....	Sch
RS	35	....	4	2000	254	Pr	....	....	AK	....	Sch
Hs	35	2⅞ x 3½	4	4600	116	Pr	....	....	Delco or Au	....	Zen
As	40	3⅞ x 4½	4	1500	335	Pr	....	....	Au	....	Sch or Str
	50	4 x 5	4	1450	680	Pr	....	....	AK	....	Sch
C	60	3⅞ x 4½	4	3000	298	Pr	....	....	Au	....	Sch or Str
KERMATH Detroit, Mich.											
4	5	3½ x 4	2	800	380	Pu & Spl	Own	Au	Bo	Ch	May
6	8	3¾ x 4	2	800	380	Pu & Spl	Own	Au	Bo	Ch	May
8	10	4 x 4	2	800	387	Pu & Spl	Own	Au	Bo	Ch	May
12	16	3½ x 4	4	1200	548	Pu & Spl	Own	Au	Bo	Ch	Kn
16	20	3¾ x 4	4	1200	568	Pu & Spl	Own	Au	Bo	Ch	Kn
20	25	4 x 4	4	1200	635	Pu & Spl	Own	Au	Bo	Ch	Kn
35	40	4⅜ x 5½	4	1200	1010	Pr	Par	Delco	Delco	Ch	Sch
50	55	4⅜ x 5½	4	1500	775	Pr	Par	Delco	Delco	Ch	Sch
65	70	4⅜ x 5½	6	1200	1540	Pr	Joes	Delco	Delco	Ch	Sch
85	105	4⅝ x 5½	6	1500	1570	Pr	Joes	Delco	Delco	Ch	Sch
100	100	4⅜ x 5½	6	1800	1205	Pr	Joes	Delco	Delco	Ch	Sch
125	142	4⅝ x 5½	6	2200	1235	Pr	Joes	Delco	Delco	Ch	Sch
150—L Head	....	5 x 5¾	6	....	1340	Pr	Joes	Delco	Delco	Ch	Hol D D
150—Overhead Valve	....	5 x 5½	6	2200	1290	Pr	Joes	Delco	Delco	Ch	Hol D D
200—Overhead Valve	....	5 x 5¾	6	2250	1390	Pr	Joes	Delco	Delco	Ch	Hol D D
LONG ISLAND Sayville, N. Y.											
R	15	3¾ x 4	4	1000	475	Spl	Joes	El	DR	Bo	Kn
HS	25	3⅜ x 4	4	2000	410	Spl	Joes	El	DR	Bo	Str
H	30	4 x 5	4	1000	1100	Pr	Joes	El	DR	Bo	Str
HR	45	4 x 5	4	1800	850	Pr	Joes	El	DR	Bo	Str
S-1	5	3¾ x 4¼	1	900	225	Spl	Joes	....	Bo	Bo	Kn
S-2	10	3¾ x 4¼	2	900	820	Spl	Joes	....	Bo	Bo	Kn
LYCOMING Williamsport, Pa.											
UC	125	3⅜ x 4½	8	3200	960	Pr	Joes	DR	DR	AC	Sch
UA	40	3⅛ x 3⅞	4	3500	....	Pr	Joes	DR	DR	AC	Sch
UE	165	3¾ x 4¾	8	3000	....	Pr	Joes	DR	DR	AC	Sch
MAYBACH-ZEPPELIN New York, N. Y.											
VL-2	600	5⁹⁄₁₆ x 7⅛	12	1600	2450	Pr	Direct Rev.	Air	Rob Bo	Rob Bo	Own
S-5	110	3¹¹⁄₁₆ x 6⅝	6	1800	1085	Pr	Own	Rob Bo	Rob Bo	Rob Bo	Own
MURRAY & TREGURTHA N. Quincy, Mass.											
E-4	50	6½ x 8	4	550	2600	Pr	Own	NE	Bo & DR	AC	Zen
E-6	75	6½ x 8	6	550	3500	Pr	Own	NE	Sd & DR	AC	Zen
L-4	60	6½ x 8	4	650	2600	Pr	Own	NE	Bo & DR	AC	Zen
L-6	100	6½ x 8	6	650	3500	Pr	Own	NE	Sd & DR	AC	Zen
H-6	200	7½ x 10	6	800	6000	Pr	Own	Air	Sd & DR	AC	Zen
K-6	300	6¼ x 7¾	6	1650	2100	Pr	Own	LN	4-DR	AC	Mil
J-6	400	7¼ x 9	6	1400	3600	Pr	Own	Gray-Davis	4-DR	AC	Mil
NIAGARA Dunkirk, N. Y.											
8L	135	3⅝ x 4½	8	3000	869	Pr	Joes	Au	Au	....	Sch
8M	155	4 x 4½	8	2800	882	Pr	Joes	Au	Au	....	Sch
8LR—Red. Gear	135	3⅝ x 4½	8	2750	959	Pr	Joes	Au	Au	....	Sch
8 MR—Red. Gear	155	4 x 4½	8	2600	971	Pr	Joes	Au	Au	....	Sch
8LS*	170	3⅝ x 4½	8	3000	929	Pr	Joes	Au	Au	....	Sch
8 MS*	200	4 x 4½	8	2800	942	Pr	Joes	Au	Au	....	Sch
8 LSR—Red. Gear*	170	⅝ x 4½	8	2850	1019	Pr	Joes	Au	Au	....	Sch
8 MSR—Red. Gear*	200	4 x 4½	8	2700	1032	Pr	Joes	Au	Au	....	Sch
4H	40	3⅛ x 4	4	4000	320	Pr	Joes	Au	Au	....	Til
Special	16	2¾ x 4	4	2000	....	Pr	Joes	Au	Au	....	Til
	*Supercharged										
PACKARD Detroit, Mich.											
Gold Cup (3M-621)	260	5⅜ x 4⁹⁄₁₆	6	2500	900	Pr	Joes	Eclipse	Delco	Ch	Str
Sweepstakes (2M-1242)	500	5⅜ x 4⁹⁄₁₆	12	2500	1175	Pr	Joes	Eclipse	Delco	Ch	Str
Harmsworth (2M-2500)	1000	6⅜ x 0½	12	2450	2025	Pr	Capitol	De Jon	Delco	Ch	Str
PALMER Cos Cob, Conn.											
C	4	4½ x 4½	1	600	240	Oil in Gas	Own	Au	Ma & Br	Ch	Sch
YT1	2	3 x 3½	1	1000	98	Spl	Own	Au	Timer	Ch	May
NL1	3½	4½ x 4½	1	600	350	Spl	Own	Au	Timer	Ch	Sch
LH	10-15	3 x 4	4	1500	375	Pr	Own	Au	Au	Ch	Zen
PB6	35-40	3½ x 4½	6	1400	1000	Pr	Own	Au	Au	Ch	Sch
PNR1	5-6	5 x 6	1	600	400	Spl	Own	Au	Timer	Ch	Sch
ZR1	7	5½ x 6	1	700	425	Spl	Own	Au	Timer	Ch	Sch
PNR2	12	5 x 6	2	600	750	Spl	Own	Au	AK	Ch	Sch
ZR2	18	5½ x 6	2	800	775	Spl	Own	Au	AK	Ch	Sch
PNR3	18	5 x 6	3	600	1000	Spl	Own	Au	AK	Ch	Str
ZR3	30	5½ x 6	3	800	1100	Spl	Own	Au	AK	Ch	Str
PNR4	24	5 x 6	4	600	1250	Spl	Own	Au	AK	Ch	Str
ZR4	40	5½ x 6	4	800	1300	Spl	Own	Au	AK	Ch	Str
F2	16-18	6⅜ x 8	2	400	1600	Spl & Oiler	Own	Au	AK	Ch	Str
NK2	20-25	7½ x 10	2	400	3000	Spl & Oiler	Own	Au	AK	Ch	Str
F3	24-26	6⅜ x 8	3	400	2000	Sp. & Oiler	Own	Au	AK	Ch	Str
NK3	30-35	7½ x 10	3	400	3500	Spl & Oiler	Own	Au	AK	Ch	Str
F4	32-35	6⅜ x 8	4	400	2400	Spl & Oiler	Own	Au	AK	Ch	Str
NK4	45-50	7½ x 10	4	400	4200	Spl & Oiler	Own	Au	AK	Ch	Str
F6	50	6⅜ x 8	6	450	3800	Spl & Oiler	Own	Au	AK	Ch	Str
NK6	80	7½ x 10	6	450	5600	Spl & Oiler	Own	Au	AK	Ch	Str
PAL	20-35	4 x 5	4	1400	750	Pr	Own	DR	DR	Ch	Sch

(*Continued on page* 240)
See page 254 for Key to Equipment Symbols

"GEE, WE'RE SORRY NOT TO EXHIBIT AT THE SHOW, BUT WE'RE 'ALL SOLD OUT' AND OUR FIRST TWO 50 FOOTERS CAN BE SEEN NOW IN MIAMI.

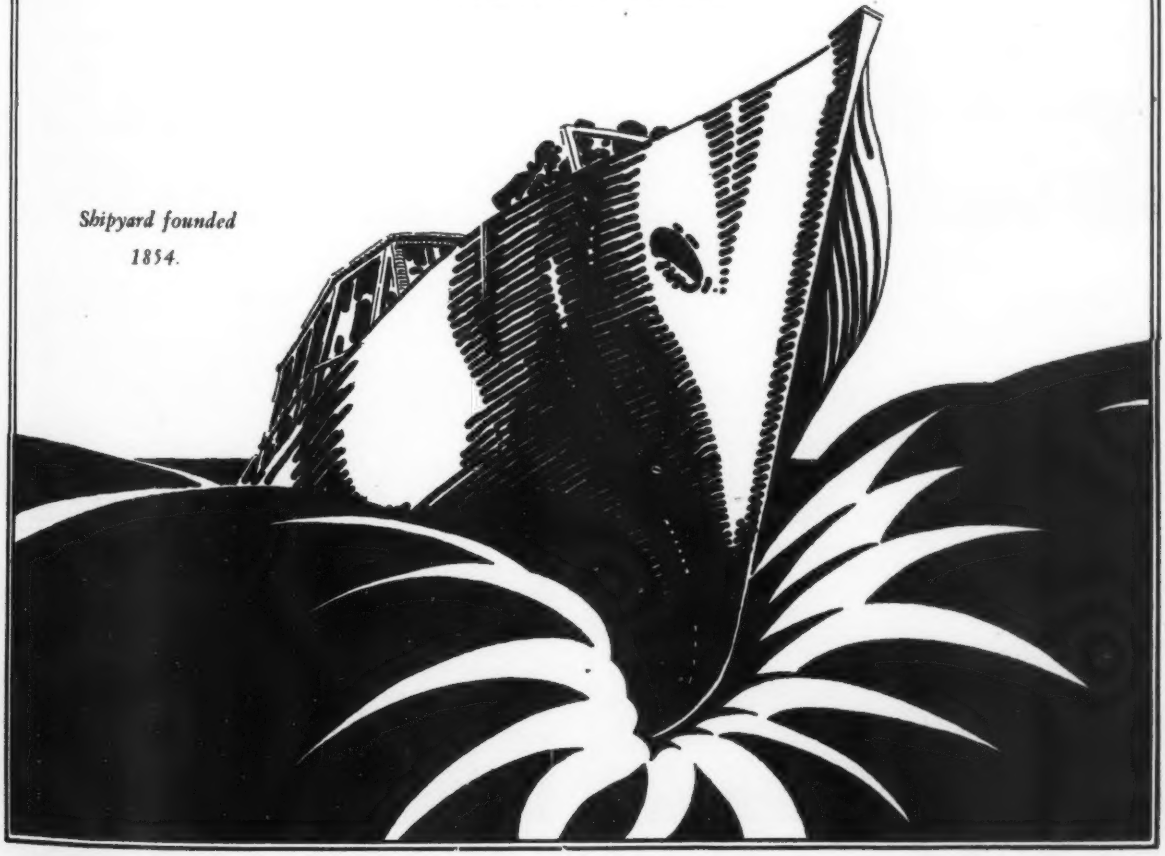
"SEVEN SEAS CRUISERS"

INDIVIDUALLY DECORATED BY JOSEPH URBAN,
POWERED BY TWIN 180 H. P. STERLING ENGINES,
CUSTOM-BUILT SPECIFICATIONS THROUGHOUT.
—— SPRING OUTPUT LIMITED ——

Correspondence Invited

ALMAC YACHT CORPORATION

LOUIS O. MACLOON, President
MYSTIC, CONN.

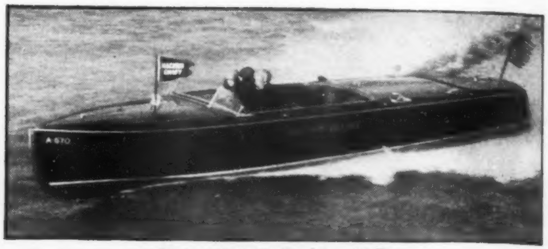


Shipyard founded 1854.

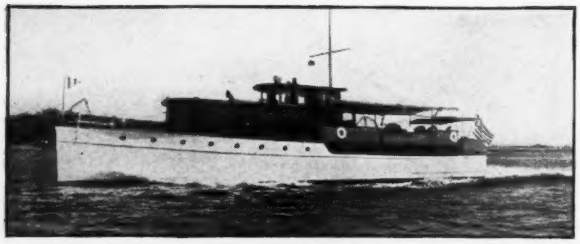
More than 75 per cent of the Motor Boat Show are using standard equipment . . . .

Use this list

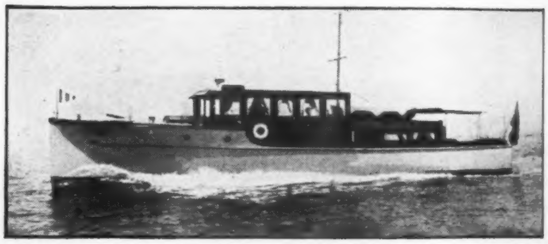
Dodge 26-Ft. Sedan Model,
Dodge Boat Works, Detroit, Mich.



Hacker Dolphin De Luxe 29-Ft.,
Hacker Boat Company, Mt. Clemens, Mich.

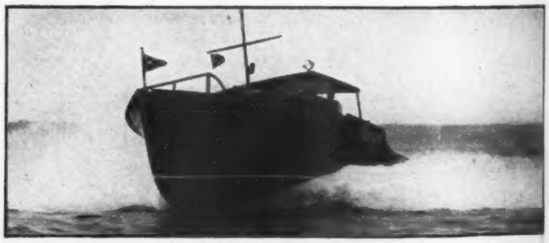


"Madge III" 77-Ft. Cruiser,
New York Yacht Launch & Engine Co., Morris Hts., N. Y.

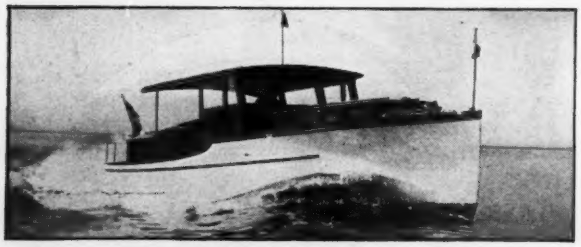


"Josephine"—A Dawn "48,"
The Dawn Boat Corporation, Clason Point, N. Y.

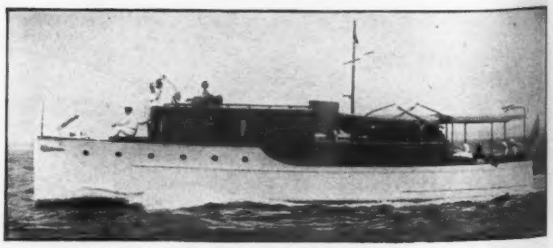
39-Ft. "Sea Gull" Sedan Cruiser,
Robinson Marine Constr. Co., Benton Harbor, Mich.



Speed cruiser—twin screw 38-Ft. express commuter,
Dyer Motorcraft Corporation, East Greenwich, R. I.



Elco 38-Ft. double cabin cruiser,
Elco Works, Bayonne, N. J.



A.C.F. 47-Ft. Cabin Cruiser,
A.C.F. Cruisers, New York, N. Y.

boat builders exhibiting at the Goodrich Cutless Bearings as If you are buying a boat . . .

as a guide~

THE following is a "blue ribbon" list of American standardized boat builders, who use Goodrich bearings as *standard equipment.* It proves that a vast majority of builders are doing everything possible to insure smooth operation and to reduce the trouble and expense of upkeep in the boats they build. Boat owners generally know the great importance of modern strut and stern bearings. The list given below includes standardized boat builders only. In addition there are many builders who do not build standardized boats who use Goodrich bearings exclusively.

The American Car & Foundry Company, New York, N.Y.
Banfield Sea Skiff Works, New York, N.Y.
Corsair Boat Company, Detroit, Michigan.
Dachel-Carter Boat Company, Inc., Benton Harbor, Mich.
Dart Boats, Inc., Toledo, Ohio.
Dawn Boat Corporation, New York, N. Y.
Horace E. Dodge Boat Works, Detroit, Mich.
Dunphy Boat Mfg. Company, Eau Claire, Wisconsin.
Dyer Motorcraft Corp., East Greenwich, R.I.
The Elco Works, Bayonne, N. J.
Gray Boats, Thomaston, Me.
Hacker Boat Company, Mt. Clemens, Mich.
Huckins Yacht Corporation, Jacksonville, Fla.
Frederic P. Humphreys, Inc., New York, N. Y.
Hubert S. Johnson, Bayhead, N. J.
Luders Marine Construction Co., Stamford, Conn.
Geo. Lawley & Sons Corporation, Boston, Mass.
A. G. Liggett & Son Company, Wyandotte, Mich.
Long Island Shipyard, Inc., Port Jefferson, L. I., N. Y.
Marine Construction Company, Wilmington, Del.
New York Yacht, Launch & Engine Co., New York, N. Y.
Robinson Marine Construction Co., Benton Harbor, Mich.
W. F. Rudduck Boat & Yacht Works, Greenwich, Conn.
Sea Sled Corporation, New York, N. Y.
Toppan Boat & Engine Company, Medford, Mass.
Vineyard Shipbldg. Co., Milford, Del.
Wheeler Shipyard, Brooklyn, N. Y.
Whitney Woodcraft Corp., East Hartford, Conn.

Send to The B. F. Goodrich Rubber Co., Akron, Ohio, for further information and the name of the distributor nearest you.

A PRODUCT OF THE B. F. GOODRICH RUBBER CO.

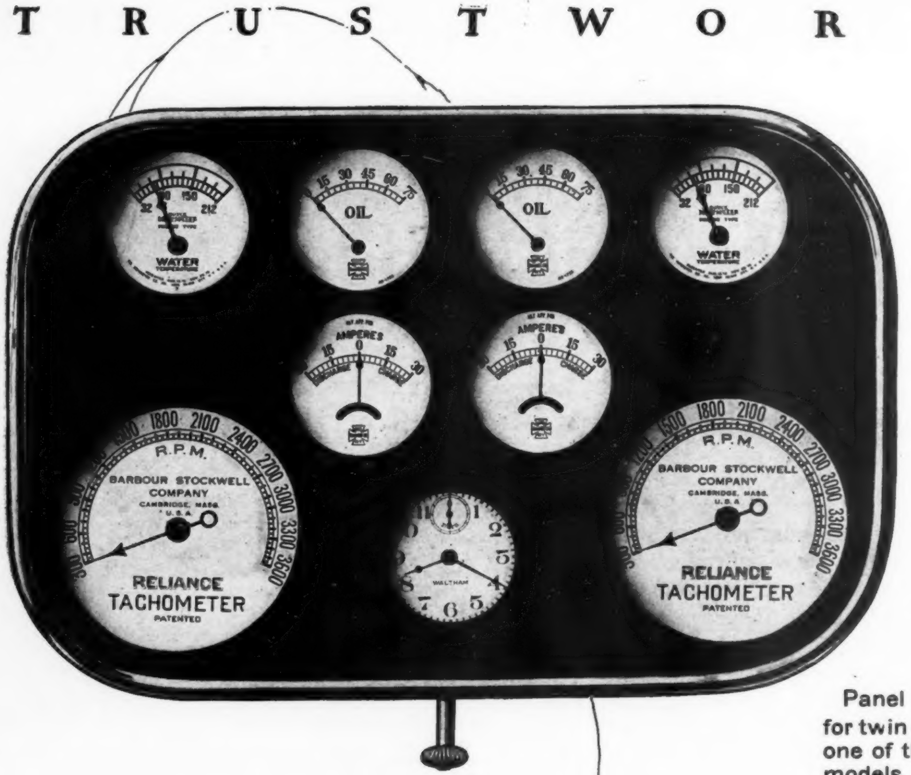
26-Ft. standardized runabout,
Dart Boats, Inc., Toledo, Ohio

New Banfield 32-Ft. standardized Sea Skiff,
Banfield Sea Skiff Works, Inc., New York, N. Y.

Model 22 Sea Sled,
Sea Sled Corporation, New York, N. Y.

A standard 72-Ft. Ludership, designed and built
by Luders Marine Construction Company, Stamford, Conn.

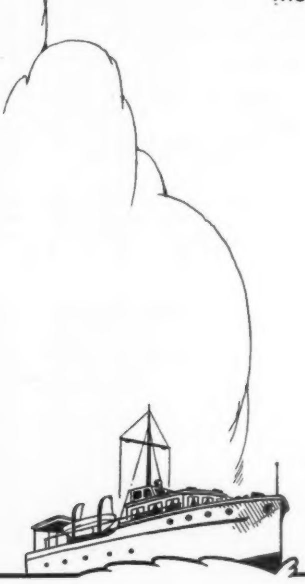
TRUSTWORTHY


WATER
OIL
OIL
WATER
AMPERES
AMPERES
R.P.M.
BARBOUR STOCKWELL COMPANY
CAMBRIDGE, MASS. U.S.A.
RELIANCE TACHOMETER
PATENTED
WALTHAM
R.P.M.
BARBOUR STOCKWELL COMPANY
CAMBRIDGE, MASS. U.S.A.
RELIANCE TACHOMETER
PATENTED

Panel Number 5B
for twin screw cruisers
one of thirteen de luxe
models for fine craft

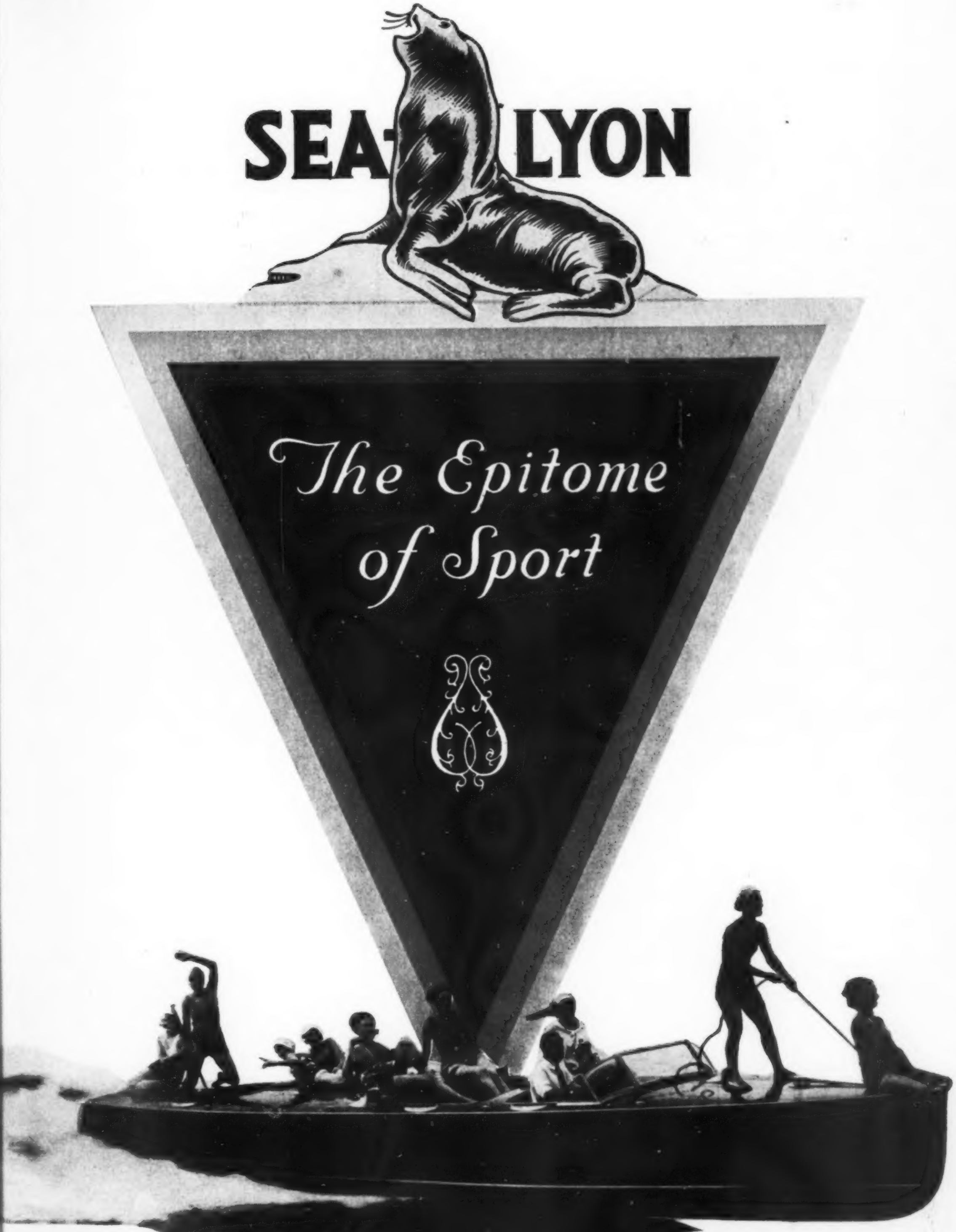
on boats by
A. C. F.
Auto-Hydro
Consolidated
Dachel-Carter
Elco
Fleetwing
Gar-Wood
Hacker
Luders
Lyon-Tuttle
Seven Seas

on engines by
Bessemer
Buda
Buffalo
Hall-Scott
Sterling
Winton
Wright



RELIANCE
PANELS and TACHOMETERS

BARBOUR STOCKWELL COMPANY · CAMBRIDGE · MASSACHUSETTS


SEA-LYON
The Epitome of Sport

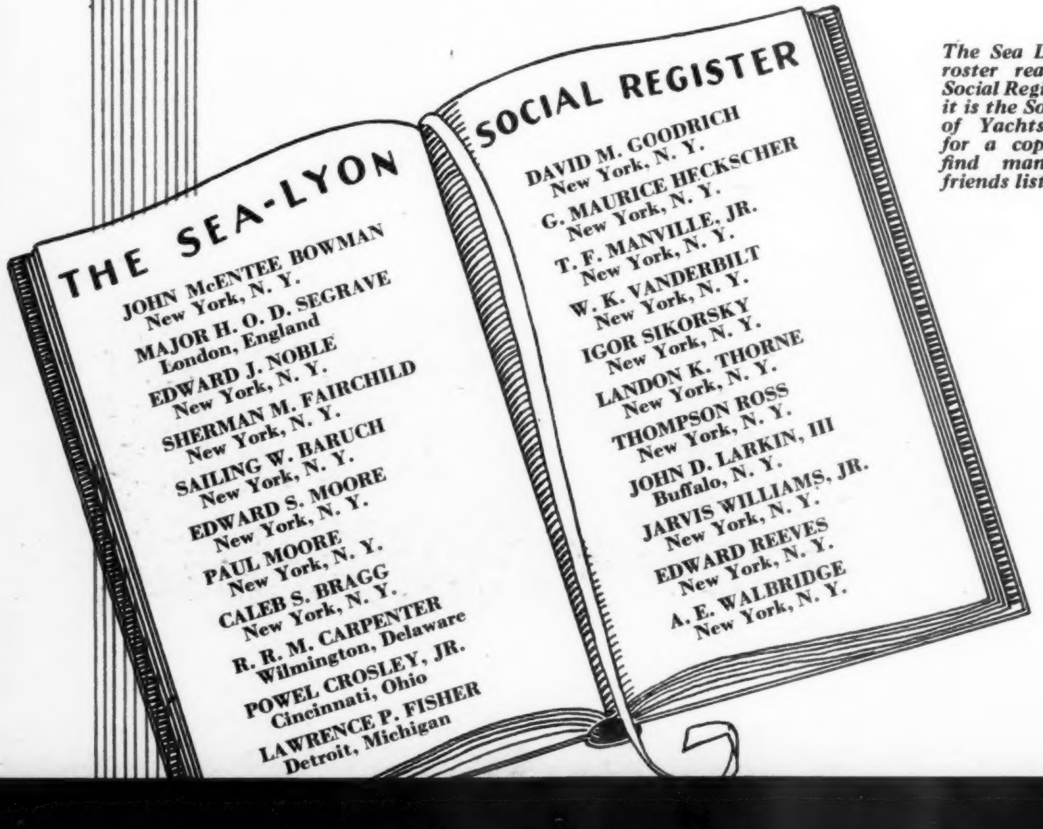
The Portals of a New World of Sport

WHEN Major H. O. D. Segrave—holder of the world's speed record on land; designer, builder and skipper of "Miss England" which now holds the motor boat championship of the world—stepped from a Sea Lyon after a fast run, he expressed his opinion of this fine boat in the most flattering possible way. He bought one!

But it is not unusual for sportsmen who have enjoyed a single brief run in a Sea Lyon, to buy one. Even the sight of this smart, low lined craft in a show-window opens the portals to a new world of sport . . . sport which embraces every thrill the water holds.

Indeed, men who know runabouts intimately are awed by Sea Lyon's remarkable combination of rushing speed with softly cushioned, smooth-riding comfort—by the superb designs which Ned Purdy, dean of custom runabout designers and racing boat builders, has achieved.

Sea Lyon is, in every respect, the epitome of de luxe marine construction. More carefully and expensively constructed than any other standardized runabout, Sea Lyon has set a standard in faultlessly dependable performance—not alone for a season, but for seasons on end—performance which will not be excelled in many a year . . . and then perhaps only by some future Sea Lyon!



THE SEA-LYON

JOHN McENTEE BOWMAN
New York, N. Y.
MAJOR H. O. D. SEGRAVE
London, England
EDWARD J. NOBLE
New York, N. Y.
SHERMAN M. FAIRCHILD
New York, N. Y.
SAILING W. BARUCH
New York, N. Y.
EDWARD S. MOORE
New York, N. Y.
PAUL MOORE
New York, N. Y.
CALEB S. BRAGG
New York, N. Y.
R. R. M. CARPENTER
Wilmington, Delaware
POWEL CROSLEY, JR.
Cincinnati, Ohio
LAWRENCE P. FISHER
Detroit, Michigan

SOCIAL REGISTER

DAVID M. GOODRICH
New York, N. Y.
G. MAURICE HECKSCHER
New York, N. Y.
T. F. MANVILLE, JR.
New York, N. Y.
W. K. VANDERBILT
New York, N. Y.
IGOR SIKORSKY
New York, N. Y.
LANDON K. THORNE
New York, N. Y.
THOMPSON ROSS
New York, N. Y.
JOHN D. LARKIN, III
Buffalo, N. Y.
JARVIS WILLIAMS, JR.
New York, N. Y.
EDWARD REEVES
New York, N. Y.
A. E. WALBRIDGE
New York, N. Y.

The Sea Lyon owner's roster reads like the Social Register. Indeed, it is the Social Register of Yachtsmen. Write for a copy; you will find many of your friends listed.

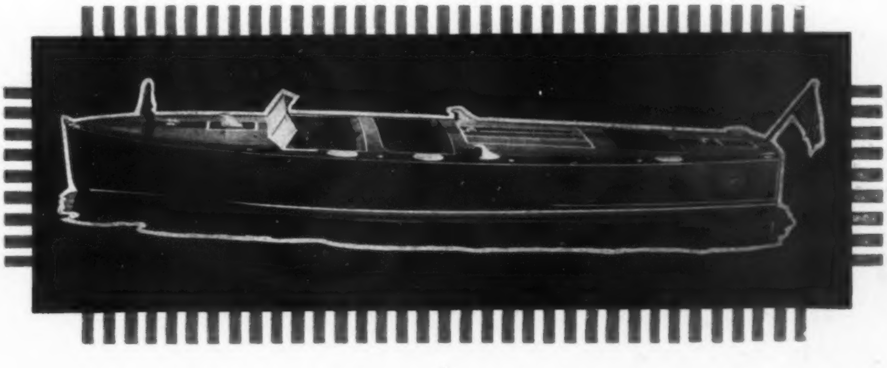
Sea-Lyon 46

The Sea Lyon 46 was planned and constructed with the definite objective of building the ultimate in runabout luxury. Cost was never a factor. Nevertheless, the Sea Lyon 46 competes in value with boats which do not compare with it at all!

No more beautiful boat was ever conceived. Dark French grey topsides with silver leaf waterline and bright green underbody,—natural mahogany decks set off by dark walnut kingplank and covering boards.—Burbank fabric upholstering, glistening Chromium hardware,—this greyhound of the sea flashes by, as distinctively an aristocrat among fine boats as the blue ribbon winner at a Kennel Show.

Colorful, fast, always smart and unbelievably comfortable, the Sea Lyon 46 will gratify those post graduate yachtsmen who have cultivated an exacting taste in runabout qualities.

Length: 30 feet
Beam: 7 feet
Draft: 2 feet, 1 inch
Seating Capacity: 10
Motor: 200 H.P. Sterling Petrel
Price: $6500 f.o.b. or afloat at New York.



Sea-Lyon 45

Yachtsmen who have owned a string of runabouts will turn to the Sea Lyon 45 with the expectation of discovering the ultimate in swift water transportation—and see their expectations exceeded.

The Sea Lyon 45 is able beyond thought. Not alone does she know no peer among boats of her size for speed and maneuverability, but her riding comfort is peculiarly her own—freedom from pounding and spray in the roughest going and at swiftest speed.

Designed by Purdy which speaks for her grace and beauty—built and tested on salt water, which in itself insures adequate seaworthiness and strength, built to the highest custom standards without sacrifice to economy and finished and appointed in the same way—the Sea Lyon 45 is beyond all competition.

Length: 30 feet
Beam: 7 feet
Draft: 2 feet, 1 inch
Seating Capacity: 10
Motor: 200 H.P. Sterling Petrel
Price: $5950.00

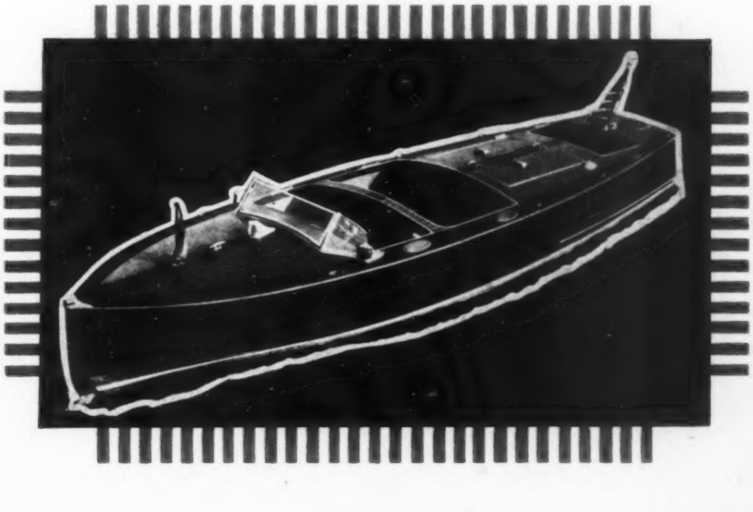
Sea-Lyon 40

Slightly smaller than the Sea Lyon 45, the 40 is the unquestioned queen of her class. Designed and built to the same standards of masterful quality and from the same obviously better materials, only the larger Sea Lyons can surpass her in smartness or ability.

More roomy than any other boat of her length on the market, with a score of important refinements, the Sea Lyon 40 is exceptionally fast, extremely seaworthy and a remarkably comfortable runabout of moderate size and price.

Sportsmen who are looking for a runabout which is from every angle a superlative craft —able, handsome, swift, smooth-riding— will find in the Sea-Lyon 40 a boat with performance more than commensurate with her cost.

Length: 28 feet
Beam: 6 feet, 7 inches
Draft: 2 feet, 2 inches
Seating Capacity: 10
Motor: 200 H.P. Kermath or Scripps optional
Price: $4650.

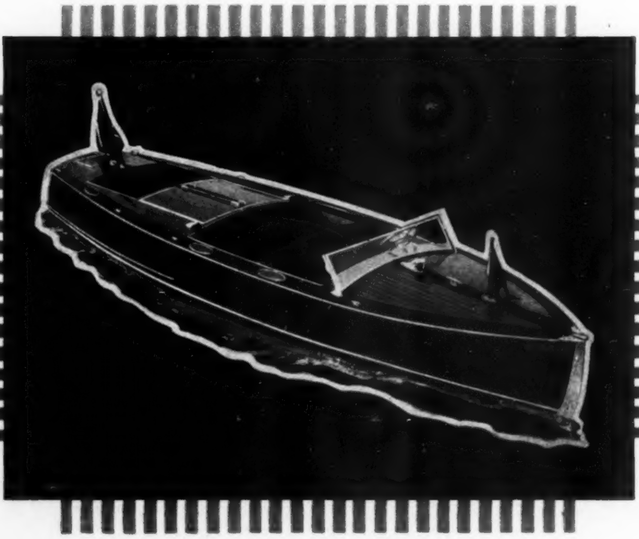


Sea-Lyon 35

One of the sportiest runabouts ever built, the Sea Lyon 35 lacks only a few feet in length, a few miles in speed, to equal the larger Sea Lyons of double her cost.

Nothing is lost in style, beauty or smartness. Perhaps something is gained in handling and control for she can be steered through the eye of a needle, spun around within a length at top speed, or rushed headlong at the landing, slowed down and eased alongside in a split second with the delicacy of a mother's caress.

The 35 rides a bigger sea than any 26- or 28-footer we ever saw. She is fast, light-footed, buoyant as a cork and agile as a stunt plane. Always a surprising performer. The price is a still greater surprise—less than $3000.



Length: 24 feet
Beam: 6 feet, 2 inches
Draft: 1 foot, 10 inches
Seating Capacity: 8
Motor: 110 H.P. Chrysler Imperial
Price: $2975.

along-
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26- or
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Sea-Lyon 30

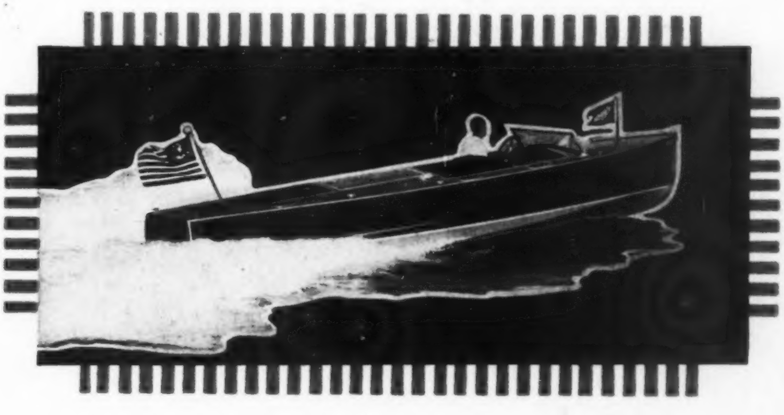
The Sea Lyon 30 has identically the same hull and appointments as the 35, differing only in power plant and speed.

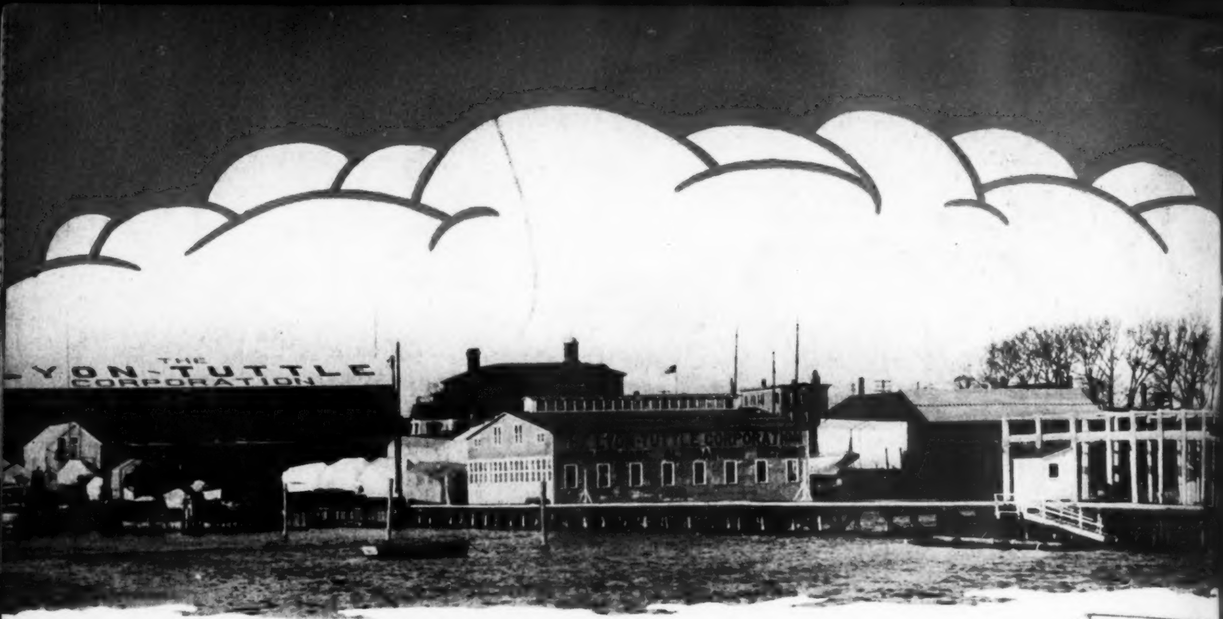
She is built of genuine Honduras mahogany. Her hardware is expressive of the honesty of her construction—solid nickel silver being used rather than nickel plate.

She compares most favorably in roominess, speed, and riding qualities in any sea, with boats costing several thousand dollars more.

The Sea Lyon 30 goes far beyond accepted standards of her class in every respect but price.

Length: 24 feet
Beam: 6 feet, 2 inches
Draft: 1 foot, 10 inches
Seating Capacity: 8
Motor: 75 H.P. Chrysler Crown
Price: $2675.





The Lyon Plant and Service Station at City Island

Craft which "disarm criticism" deserve the service of critics!

Electric Boat Hoist

Electric Boat Elevator Serves all Floors

To those acquainted with the typical yacht repair yard, the accompanying illustrations will instantly convey the unusual service facilities afforded by the Lyon plant at City Island, New York City. Only a few views are shown here.

Specially designed machinery and equipment, electric hoists and elevators, several marine railways, exceptional storage space, shops which include every department of boat building—these are but the physical facilities.

Combine with these the service of the very men who created the Sea Lyons—an organization of 200 experts who are as critical of their work as a yachtsman of his boat—an organization which provides permanent protection to the Sea Lyon owner's investment and a welcome relief to the owner of any other make. Sea Lyons are the only standardized runabouts with complete plant and service facilities in New York City.

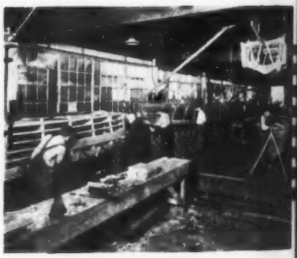
A limited number of excellent sales territories available

Write for complete catalog illustrating and describing various Sea Lyon models in detail, also a copy of our Vanity Book

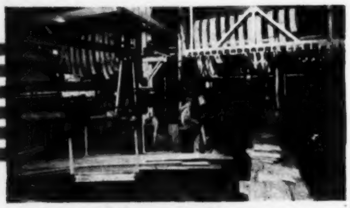
HOWARD W. LYON
INCORPORATED
HOTEL BARCLAY
532 Lexington Avenue (at 49th Street)
NEW YORK

Telephones: Wickersham 6432-6433

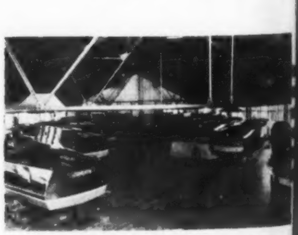
Plant and Service Station: City Island 1645-1646



Planking the Frames

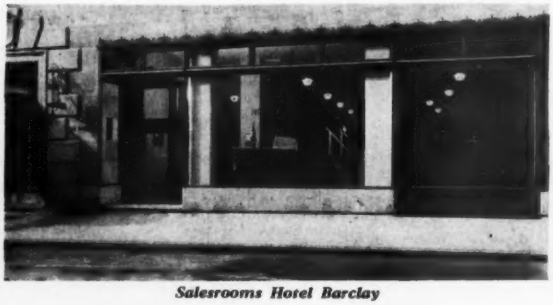


The Mill where Lumber is Cut and Shaped



Finishing Department

Machine Shop

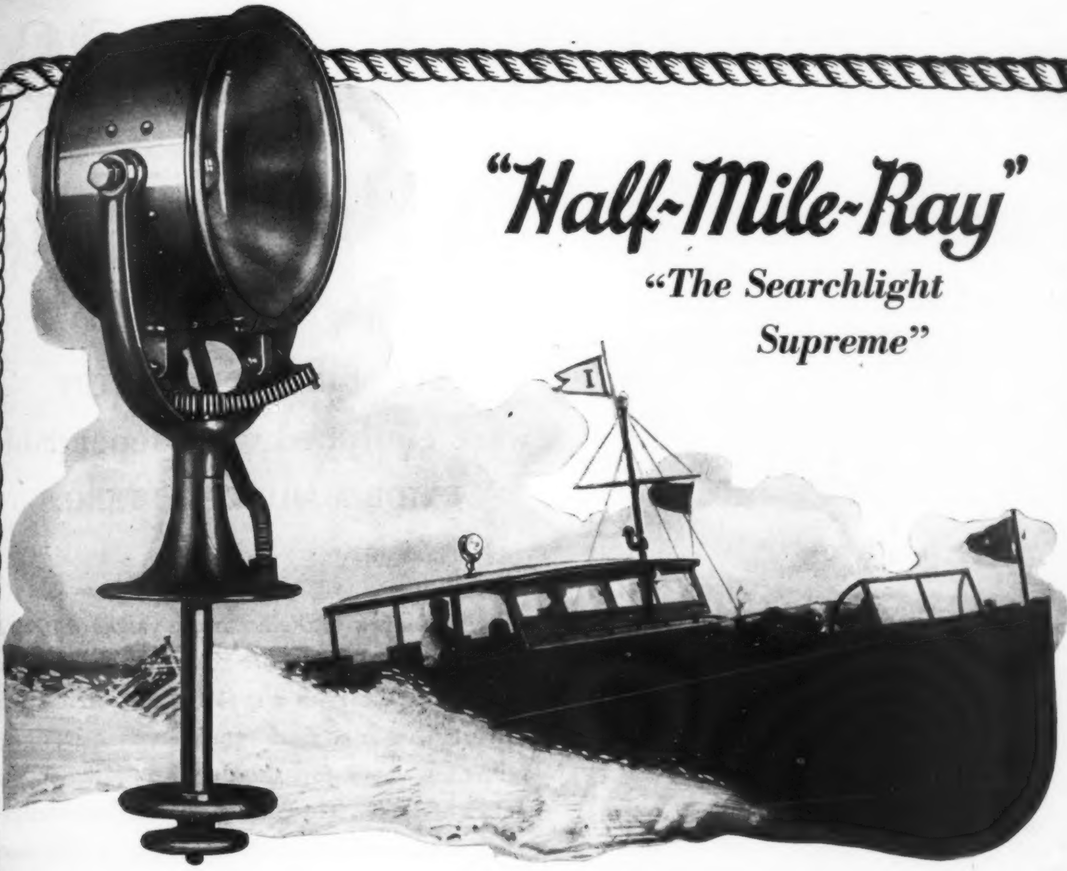


Salesrooms Hotel Barclay

Upholstery Division

"Half-Mile-Ray"

"The Searchlight Supreme"



A Necessity for Your Boat

Makes Night Cruising Safer -- More Pleasurable

THE Half-Mile-Ray offers you everything you could desire in a searchlight. A powerful, piercing beam which bores through darkness, fog and weather obstacles -- sturdy, weatherproof construction -- beautiful in design -- *delightfully simple control.*

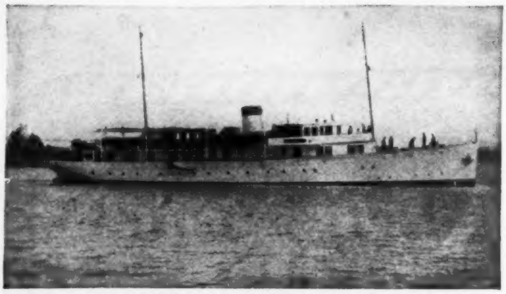
Standard equipment on Elco, Matthews, Chris-Craft, Richardson, Rochester, Chance, Greenport, Jardine, Banfield, Humphreys, Wheeler, and other fine watercraft. *PROOF* of its superior quality and performance.

Also One-Mile-Ray, same features and twice the range—Quarter-Mile-Ray, for outboard motor boats

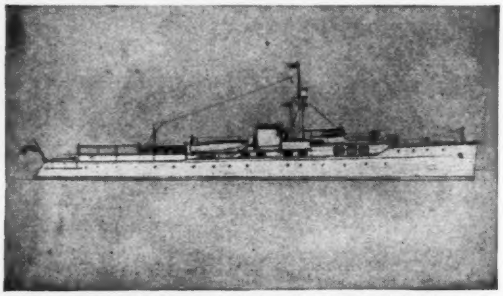
[*Mail coupon for folder describing Portable Light Searchlights for every Marine purpose—$18 to $125. Exclusive Marine distributors for Northeast (Whistletone) Horns and Sileno Sirens.*]

The **PORTABLE LIGHT COMPANY**
12 WARREN ST., NEW YORK, N. Y.

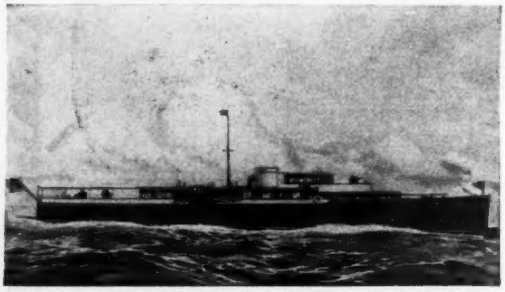
THE PORTABLE LIGHT COMPANY,
12 Warren St., New York City.
Send me information on Portable Light Searchlights.
Name..............................
Address..............................
City..............................
State..............................
M. B. 2



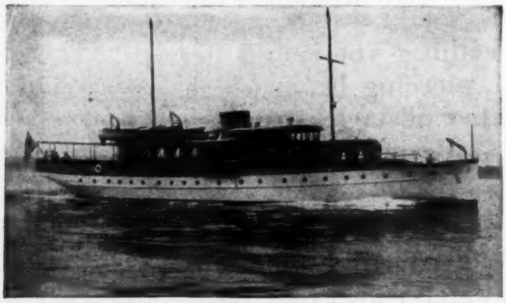
OLIVE K., 170 ft. LOA, designed Cox & Stevens, Inc., & John H. Wells, Inc., built DeFoe Boat and Motor Works, Exide-equipped.



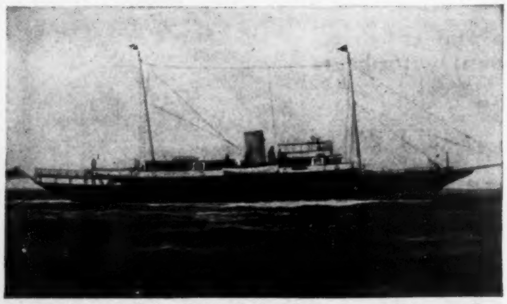
POULE D'EAU, 122 feet LOA, designed by Henry J. Gielow, Inc., built by George Lawley & Sons, Inc., Exide-equipped.



AVALANCHE, 160 feet LOA, designed by Tams, Inc., built by Consolidated Shipbuilding Corp., Exide-equipped.



NIRVANA IV, 100 feet LOA, designed and built by the New York Yacht, Launch and Engine Company, Exide-equipped.



LOTOSLAND, 206 feet LOA, designed by Cox and Stevens, Inc., built by Pusey and Jones Corp., Exide-equipped.

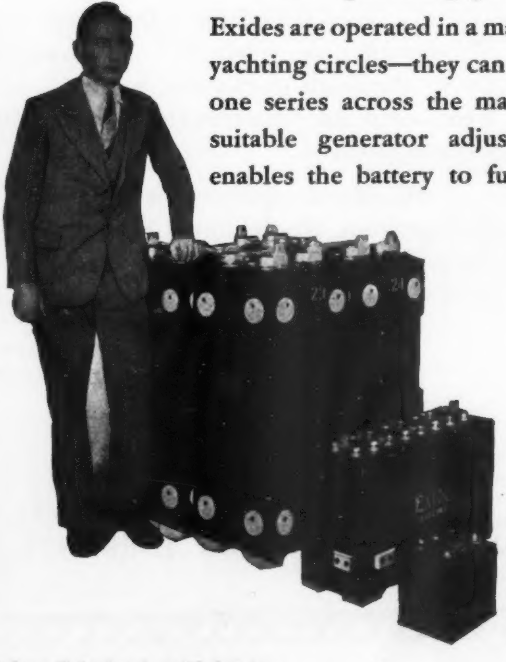
In 1929, All Yachts

BUILT IN THIS COUNTRY were equipped with dependable EXIDE MARINE BATTERIES

ONLY a few of the luxurious yachts of 1929 are pictured here. Like so many others of every size, each one carries a reliable, economical Exide Battery to fill electrical requirements. Designers, builders, owners and skippers know the superior quality of Exide Batteries. And this knowledge is reflected in the fact that the majority of all pleasure craft over one hundred feet in length, built and launched in America last year, were equipped with these performance-proved batteries.

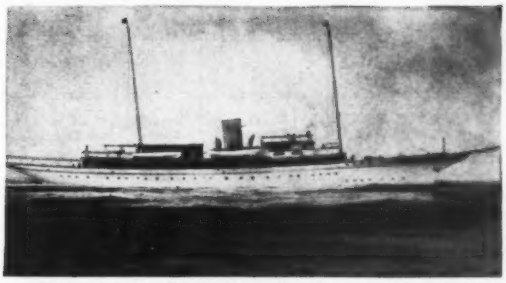
New operating principle

Exides are operated in a manner new in yachting circles—they can be floated in one series across the main bus with suitable generator adjustment. This enables the battery to function *auto-*



There's an Exide Battery to meet the needs of any vessel, from speed boat to ocean liner.

Majority of over 100 feet



NAHKODA, 234 feet LOA, designed by Cox and Stevens, Inc., & John H. Wells, Inc., built by Pusey and Jones Corp., Exide-equipped.

Here are additional 100 foot and over 1929 Exide-equipped boats

ALIDA
CAMBRIONA
KLAHANEE
COLMENA
RENE
GADFLY II
ELDA
THALIA
YOREDA

The following builders of famous speed and pleasure craft have standardized on Exide Batteries:

CORSAIR
CHRIS-CRAFT
ELCO
a.c.f.
DAWN 45
DEE-WITE

N. Y. YACHT, LAUNCH & ENGINE CO.
CONSOLIDATED SHIPBUILDING CORP.

MURDONA, 126 feet LOA, designed by John H. Wells, Inc., built by Pusey and Jones Corporation, Exide-equipped.

matically and instantly in case of emergency . . . generator failure. The battery also absorbs peak loads on the generator, thus avoiding, to a large extent, fluctuating lights. The generators charge the battery as required whenever they are in operation. Thus Exides are ready at all times to meet your every electrical need; to give satisfactory service steadily, reliably and economically.

SOLANA, 106 feet LOA, designed and built by Consolidated Shipbuilding Corporation, Exide-equipped.

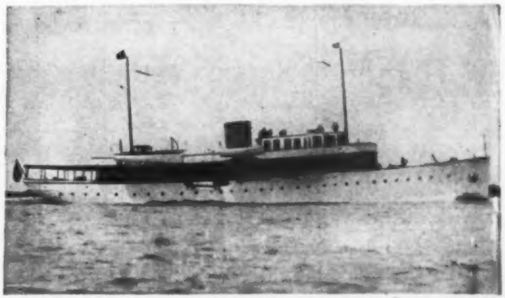
See Exide Booth at the Show

If you're going to the 1930 National Motor Boat Show, be sure to visit the Exide Booth . . . it is Number Two on the third floor. There you can see the famous Exide Marine Batteries and discuss their merits. Or, if you can't make the Show, write for "The Yachtsman's Battery" . . . It's full of valuable information.

PRINCIPIA, 112 feet LOA, designed by L. E. Geary, built by Lake Union Drydock & Shipbuilding Company, Exide-equipped.

Exide
BATTERIES
for every marine use

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
Exide Batteries of Canada, Limited, Toronto



MARGO, 165 feet LOA, designed by Henry J. Gielow, Inc., built by George Lawley & Sons, Inc., Exide-equipped.

AMERICA'S LEADING MARINE ENGINES

(Continued from page 224)

MAKE & MODEL	Horse Power	Bore & Stroke	No. of Cyl.	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark Plugs	Carburetor
REDWING **Red Wing, Minn.**											
K	4–5	3¾ x 4¾	1	800	225	Cir	....	....	Bo M	Ch	Zen
KK	7–8	3¾ x 4¾	2	800	400	Cir	Par	....	Bo M	Ch	Zen
D	10–14	2¾ x 4	4	1400	I 350 A 295	Cir	Joes	Au	Bo M	Ch	Str
AA	18–24	3¾ x 4¾	4	1200	I 640 A 530	Pr & Cir	Par	Au	Bo M	Ch	Sch
F	28–36	4⅛ x 5	4	1400	I 845 A 670	Pr	Par	Au	Bo M	Ch	Sch
B	32–40	4½ x 5	4	1400	I 865 A 690	Pr	Par	Au	Bo M	Ch	Sch
BB-Four MD	40–50	4½ x 6	4	1200	I 1200	Pr	Par	Au	Bo M	Ch	Sch
BB-Four HS	45–70	4½ x 6	4	1800	A 900	Pr	Par	Au	Bo M	Ch	Sch
Big Chief	50–60	5 x 7	4	1200	I 1700 A 1300	Pr	Par	Au	Bo & Dis	Ch	Sch
Big Chief Special	75–90	5¾ x 7	4	1200	I 1750 A 1350	Pr	Par	Au	Bo M & Dis	Ch	Sch
Warrior	30–50	3⅛ x 5	6	2000	I 750 A 650	Pr & Cir	Par	Au	Dis	Ch	Sch
Arrow	40–80	3¾ x 4½	6	2000	I 1200 A 900	Pr	Joes	Au	Bo M	Ch	Str
BB-Six MD	50–80	4½ x 6	6	1200	I 1500	Pr	Par	Au	Bo M & Dis	Ch	Sch
BB-Six HS	80–110	4½ x 6	6	1800	A 1200	Pr	Par	Au	Bo M & Dis	Ch	Sch
BB-Six Special MD	75–100	5 x 6	6	1200	I 1600	Pr	Par	LN	Bo M & Dis	Ch	Sch
BB-Six Special HS	100–150	5 x 6	6	1800	A 1300	Pr	Par	LN	Bo M & Dis	Ch	Sch
Big Chief Six	85–110	5 x 7	6	1200	I 2400 A 1850	Pr	Par	LN	Bo M & Dis	Ch	Sch
Big Chief Special Six	110–150	5¾ x 7	6	1200	I 2450 A 1900	Pr	Joes	LN	Bo M & Dis	Ch	Sch
REGAL **Coldwater, Mich.**											
Y	2	3¼ x 3½	1	800	130	Pu	Car John	....	Dis or Bo M	Ch	Sch
BA	4	4 x 4½	1	800	290	Spl	Par	....	Dis or Bo M	Ch	Sch
HA	6	4¾ x 5½	1	800	400	Spl	Par	....	Dis or Bo M	Ch	Sch
EA	7	5¼ x 6½	1	800	610	Spl	Par	....	Dis or Bo M	Ch	Sch
NB	8	4 x 4½	2	800	540	Pu	Par	....	Dis or Bo M	Ch	Sch
GB	14	4¾ x 6	2	800	900	Pu	Par	Au	Dis or Bo M	Ch	Sch
KB	16	5½ x 6	2	600	1150	Pu	Par	Au	Dis or Bo M	Ch	Sch
LB	20	6½ x 8	2	600	1850	Pu	Par	Au	Dis or Bo M	Ch	Sch
GC	30	4¾ x 6	4	800	1300	Pu	Par	Au	Dis or Bo M	Ch	Sch
KC	40	5½ x 7	4	800	1900	Pu	Par	Au	Dis or Bo M	Ch	Sch
LD	30	6½ x 8	3	600	2500	Pu	Par	Au	Dis or Bo M	Ch	Sch
LC	40	6½ x 8	4	600	2800	Pu	Par	Au	Dis or Bo M	Ch	Sch
SC	50	7½ x 9	4	500	4600	Mc C	Joes	Au	Dis or Bo M	Ch	Sch
GF	50	4¾ x 6	6	800	1700	Pu	Joes	Au	Dis or Bo M	Ch	Sch
KF	75	5½ x 7	6	800	2700	Pu	Joes	Au	Dis or Bo M	Ch	Sch
SCRIPPS **Detroit, Mich.**											
E2	12–18	4½ x 6	2	1000	725	Pr	Par	Au	Am Bo	Ch	Sch
F4	25–40	3¾ x 5	4	1600	600	Pr	Own	DR	DR	Ch	Sch
84	60–75	3¾ x 5	4	2800	550	Pr	Own	DR	DR	Ch	Sch
F6	50–100	3¾ x 5	6	2000	825	Pr	Own	DR	DR	Ch	Sch
120	100	3¾ x 5	6	2000	835	Pr	Own	DR	DR	Ch	Hol D'n Draft
124	135	3¾ x 5	6	3000	750	Pr	Own	DR	DR	Ch	Hol D'n Draft
160	100	4½ x 5¾	6	1800	1250	Pr	Joes	DR	DR	Ch	Hol D'n Draft
161	100	4½ x 5¾	6	1800	1250	Pr	Joes	DR	DR	Ch	Hol D'n Draft
162	150	4½ x 5¾	6	2300	1125	Pr	Joes	DR	DR	Ch	Hol D'n Draft
163	150	4½ x 5¾	6	2300	1125	Pr	Joes	DR	DR	Ch	Hol D'n Draft
170	125	4¾ x 5¾	6	1800	1250	Pr	Joes	DR	DR	Ch	Hol D'n Draft
171	125	4¾ x 5¾	6	1800	1250	Pr	Joes	DR	DR	Ch	Hol D'n Draft
172	175	4¾ x 5¾	6	2300	1125	Pr	Joes	DR	DR	Ch	Hol D'n Draft
173	175	4¾ x 5¾	6	2300	1125	Pr	Joes	DR	DR	Ch	Hol D'n Draft
202	200	5 x 5¾	6	2300	1135	Pr	Joes	DR	DR	Ch	Hol D'n Draft
203	200	5 x 5¾	6	2300	1135	Pr	Joes	DR	DR	Ch	Hol D'n Draft
SPEEDWAY **New York, N. Y.**											
K	22–28	4 x 4½	4	1400	550	Spl	Own	Am Bo	Am Bo	Ra	Str
Z	35–44	4½ x 5½	4	1200	850	Spl	Own	Bi	Am Bo	Ra	Str
M	48–75	5¾ x 7	4	1000	1950	Pr	Own	Bi	Bo & DR	Ra	Str
MP	155	5¾ x 7	6	1200	2025	Pr	Own	Bi	Bo & DR	Ra	Str
M	175–200	5¾ x 7	8	1200	2400	Pr	Own	Bi	Bo & DR	Ra	Str
MR	180	5¾ x 7	6	1300	2200	Pr	Own	Bi	Bo & DR	Ra	Str
M	100–175	5¾ x 7	8	1000	2900	Pr	Own	Bi	Bo & DR	Ra	Str
MP	135	5¾ x 7	6	1000	2025	Pr	Own	Bi	Bo & DR	Ra	Str
P	80–115	6¾ x 8½	6	600	4800	Pr	Own	Bi	Bo & DR	Ra	Str
R	300	7 x 8½	6	1200	4000	Pr	Own	Bi	Bo & DR	Ra	Str
STANDARD **Jersey City, N. J.**											
F-1	10–12	5 x 6½	2	450	850	Me	Own	Hand	M	....	Sch
E-1	16–18	6 x 8	2	400	1200	Me	Own	Hand	M	....	Sch
F-3	20–24	5 x 6½	4	450	1600	Me	Own	Hand	M	....	Sch
E-2	24–27	6 x 8	3	400	1800	Me	Own	Hand	M	....	Sch
E-3	32–37	6 x 8	4	400	2800	Me	Own	Hand	M	....	Sch
E-4	50–54	6 x 8	6	400	3200	Me	Own	Hand	M	....	Sch
I-1	65–75	8 x 10	4	400	5300	Me	Own	Hand	M	....	Sch
I-2	90–100	8 x 10	6	400	8000	Me	Own	Hand	M	....	Sch
N-1	125–150	8½ x 11	6	400	5800	Me	Direct Rev	Air	M	....	Sch
	220	10 x 11	6	460	6300	Me	Direct Rev	Air	M	....	Sch

(Continued on page 254)

See page 254 for Key to Equipment Symbols

MAKES FIRE COMMIT SUICIDE

C-O-TWO has an enviable record for saving lives and property on land and sea. Unsolicited testimonials verifying the unfailing dependability of C-O-TWO—conqueror of Fire—reach us from near and distant ports.

But—C-O-TWO'S unchallenged, unbeaten record was not gained merely because of the employment of carbon dioxide—the deadly foe to oil, gas and electric fires. Of equal importance is the sure certain method of release, control and direction of the C-O-TWO Gas.

The first consideration in the development of C-O-TWO has been absolute dependability. It is a secondary matter that C-O-TWO equipment is low in price. But the fact that C-O-TWO engineers have perfected a fool proof simple system as dependable as the tides is an achievement of genius.

C-O-TWO Automatic System (with separate manual release) is absolute, instantaneous death to fire, and is harmless.

The C-O-TWO System is available for the smallest runabout or the largest yacht. A booklet and price list describing the simplicity of the C-O-TWO will be sent on request. Address the factory or the nearest representative.

Preferred by
NAVAL ARCHITECTS
BOAT BUILDERS
and
BOAT BUYERS

C-O-TWO
EXHIBIT
New York
Boat Show
Booth 82

C-O-TWO FIRE EQUIPMENT CO.

1226 S. San Pedro Street, Los Angeles, Calif.

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Here's the 11-footer racing at top speed. Model EV—$170.

Designed for great sport and high speed at *low cost!*

A stern view of 10-foot sailing dinghy Model TS—$185.

The new 1930 PENN YAN Dinghies are concrete examples of what 20 years' unrivaled experience can do—better design, better construction, performance a bit better than you would rightly expect.

The Motodinghy, for example, can cut thru the water at thirty an hour—smoothly and without trace of jump or gallop. A nicety of balance—true of all PENN YAN Dinghies—means safety and comfort at all speeds.

The same is true of all PENN YAN Rowing or Sailing Dinghies. They are faster—easier to handle—better to look at.

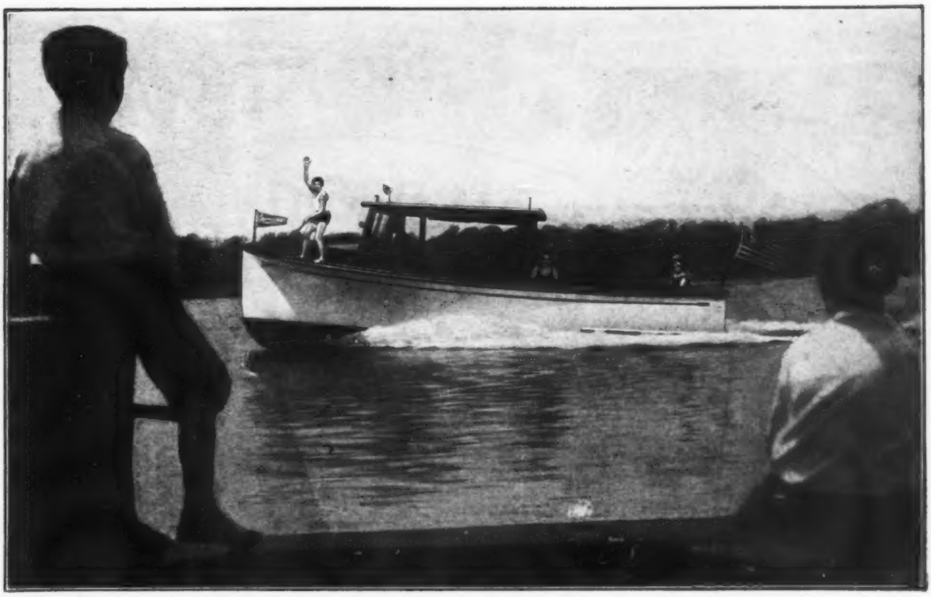
And PENN YAN Dinghies will continue to perform flawlessly year after year. The composite construction (not a substitute for wood but an improvement upon it) assures lighter weight and 40% greater strength. The boat will never need caulking nor bailing.

No matter from what angle you approach it, a PENN YAN Dinghy is a notch ahead of its rivals—whether it's appearance, performance or cost! Write for our interesting new booklet today.

PENN YAN BOAT COMPANY, Inc.
155 Water Street, Penn Yan, N. Y.

The Government uses 200 Penn Yan dinghies. From $106 to $144.

PENN YAN DINGHIES



CRUISABOUTS ARE DISPLAYED BY

Bruns-Kimball & Co., 5th Ave. & 15th St., New York City, or 102 So. Fourth St., Philadelphia, Pa.—Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass.—F. D. Homan, 78 Riverside Ave., Amityville, L. I., N. Y.—N. J. Shea, 1424 Lauderdale Ave., Lakewood, Ohio—Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit, Mich.—A. M. Deering, 1454 Builders Bldg., Chicago, Ill.—Volney E. Lacey, Charlotte Station, Rochester, N. Y.—George Bender, Erie Yacht Club, Erie, Pa.—Henry Pohl, Inc., On the Causeway, Miami, Fla.—Electric Supply Co., 210-21st St., Galveston, Texas—T. B. F. Benson, 371 Bay St., Toronto, Ont., Canada—C. O. Horstman, 813 So. Washington St., Peoria, Ill.

The Day Cruisabout Combines the Desirable Features Found in Cruiser and Runabout!

THE Richardson Day Cruisabout is neither cruiser nor runabout, but in it are the most desirable features of both types of boats.

The Richardson Cruisabouts are known for their seaworthiness and dryness when wind and waves are at their worst. That's why you will find the big, burly 29 feet long Day Cruisabout ideal for open water. It has unusual flare and reserve buoyancy so that seldom, if ever, does solid water come over the forward deck regardless of wind, waves or speed.

The Day Cruisabout has large carrying capacity—room enough for twenty to thirty people in the 16 foot cockpit. In the small cabin forward are the comfort accommodations found only on the cruising type of boat.

In addition, the Day Cruisabout has speed—not the break neck, wave-slapping, express train speed found in the high powered expensive to buy and operate runabouts, but an easy, economical 18 mile an hour speed (8 cylinder 110 H. P. Gray Marine Motor) that can be maintained all day long with comfortable riding conditions for the passengers.

If your use is mainly for a boat for swimming, fishing, fast ferry, freight, yacht tender, day boating or passenger service and not for living aboard, you cannot find a craft more suitable than the seaworthy and speedy Day Cruisabout.

Beside being economical to maintain and operate, this 29 foot boat is extremely low priced—$3,685 complete at our factory.

This novel aristocrat of the waterways is illustrated and described in Booklet "E-30." Write for it.

RICHARDSON BOAT COMPANY, INC.
350 Sweeney Street, North Tonawanda, N. Y.

Richardson
1930 Cruisabouts

ANNOUNCING A SUPREME COMBINATION OF NEW ULTRA-CUSTOM DESIGN AND MODERATE COST

"Atlas"

19-foot, double cockpit; all-mahogany, fully equipped runabout, 60 H.P. "six", 30 MPH.

$1575 F.O.B. Factory

23-foot, 8 passeng all-mahogany, fully equipped runabout, 115 H.P. "eight", 3 MPH.

$2695 F.O.B. Factory

Lines . . . . are what give a runabout . . . . *speed.* Lines . . . are what make a runabout . . . . *beautiful.* And you want both . . . . skimming, flashing speed . . . . smart, racy beauty. All of which is superbly combined in the new ATLAS Sport Runabouts . . . . designed by a master craftsman who knows boat-building like Lindbergh knows flying. All-mahogany, of course . . . . with every finishing touch of dash and refinement. And yet . . . . ATLAS prices are moderate . . . . extremely moderate.

If you are contemplating the thrilling pleasure of a new sport runabout . . . . in 19, 23, 26 or 30 feet . . . . it will certainly be to your advantage to write us for complete information.

ATLAS BOAT CORPORATION

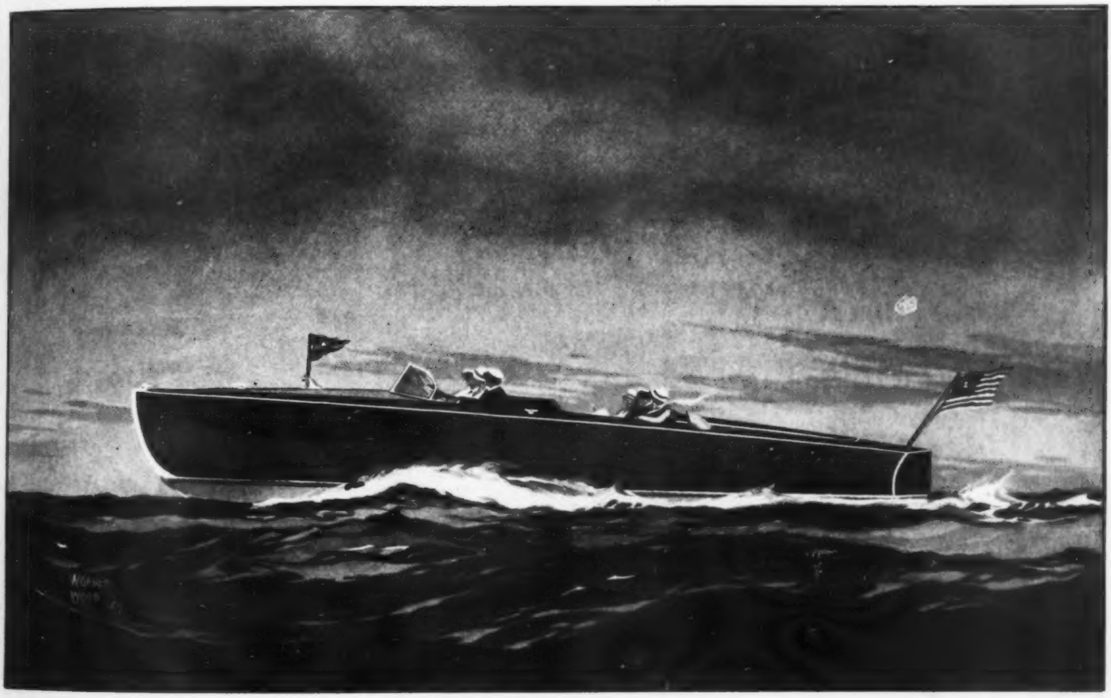
MENOMINEE, MICH.

See Our Display
the New York S
Section "U"

Universal
MOTOR CO.

Announces
The BLUE JACKET

a light-weight, high-speed four



The Century Aristocrat
A New Hacker Creation Powered by Universal Blue Jacket on Exhibition at the New York Show

Also
2 New Sixes - the 77 - the 88
A New Eight - - - - - the 115
and the ever reliable
Flexifour - Superfour—and Single

UNIVERSAL MOTOR COMPANY
OSHKOSH, WIS., U. S. A.

—NOW!

A new motor for small boats which provides all the comforts, the speed, and the convenience of a $3,000 runabout for less than half that price

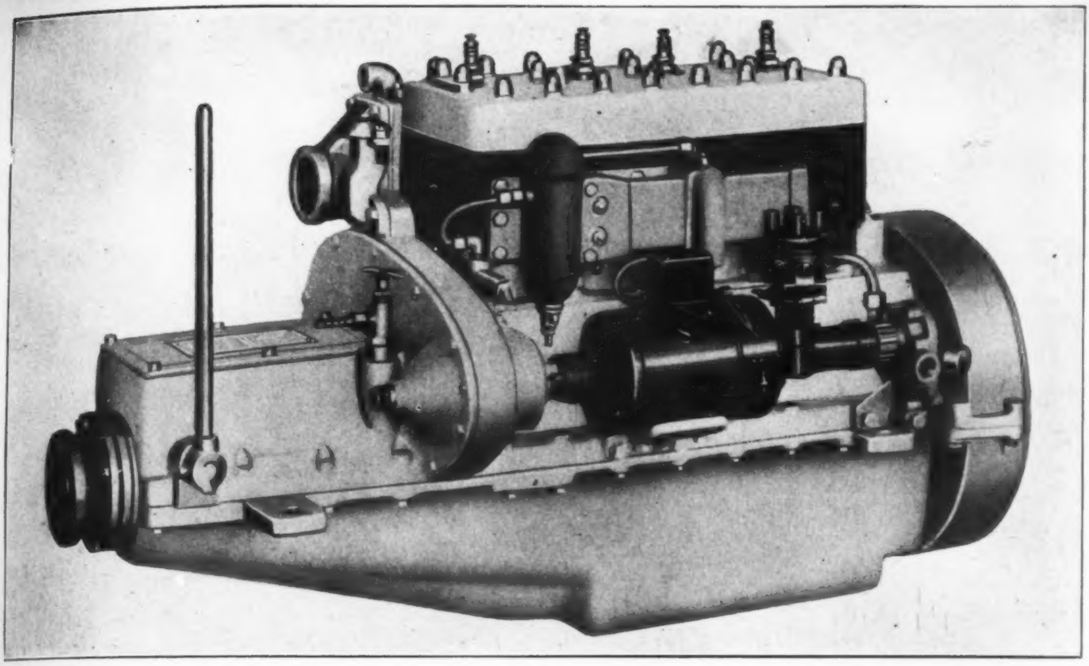
A fast 17-footer built by the Dunphy Boat Manufacturing Co., especially for the Universal Blue Jacket.

The newest member of the Universal line of true marine motors. Light—approximately three hundred pounds *fully equipped;* husky—forty-five brake-test horsepower; high speed—built to run by the hour at four thousand revolutions per minute; compact — only thirty-eight inches from stem to stern, with reverse gear, only 12⅞ inches above center of crankshaft.

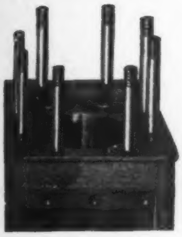
The Blue Jacket is a quality motor in every particular. There isn't a nickel's worth of quality-cutting in it. And it is more completely equipped with all the conveniences than are most motors of twice the size or three times its price. Note a few of these innovations in a small motor: electric starting, lighting, and ignition system, oil cooler and filter, five bearing crankshaft, full pressure lubrication to *every* bearing, high turbulence combustion chamber, silichrome valves, Joe's reverse gear, corrosion-proof aluminum alloy castings, new heat-dissipating pistons, built-in sump pump, gasoline pump, tachometer drive, thermometer connection, extra drive for accessories, etc.

The Blue Jacket is designed primarily for fast runabouts of less than twenty feet—preferably for the able little sixteen to eighteen footers for which heretofore there has been no power available except the outboard motor. The Blue Jacket is particularly adapted for installation in the extreme stern with an inboard-outboard drive. It is available either with standard reverse gear or with a one-way clutch for use with an inboard-outboard drive where the reverse is in the drive.

The Blue Jacket is the result of more than two years careful study and experimentation. Everything about it has been tried and tested countless times. No haste was permitted in its engineering. And Universal's rigorous testing policies mean that every Blue Jacket motor has proved itself before it reaches the hands of an owner.



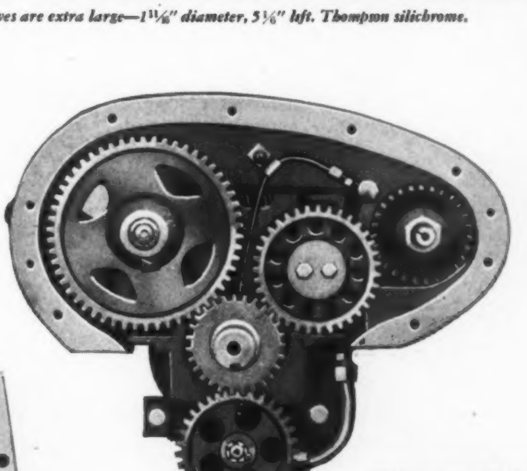
The BLUE JACKET



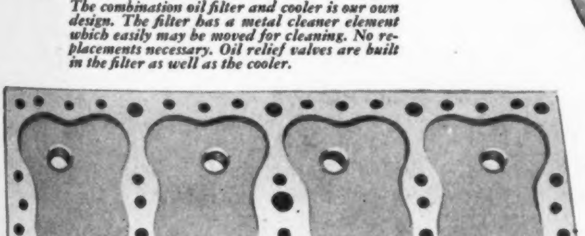
Unusual provision for assuring oil tightness and water tightness is the use of eight cylinder head studs for each cylinder. Blow-bys are virtually impossible. All stud holes going into water jackets are blind, to prevent water leaks.

Valves are extra large—1 11/16" diameter, 5/16" lift. Thompson silichrome.

The combination oil filter and cooler is our own design. The filter has a metal cleaner element which easily may be moved for cleaning. No replacements necessary. Oil relief valves are built in the filter as well as the cooler.



Timing gears are especially designed for high speed operation. Cam idler and oil pump gear made of special chrome nickel iron running against non-metallic crank and generator gears, with helical cut teeth and 1" face.

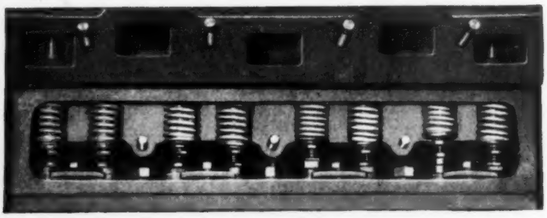


Cylinder heads are cast in the Universal foundry, under special process of an aluminum alloy. Combustion chambers of high turbulence type. Specially designed ribbing dissipates the heat, thus preventing pre-ignition at high speeds. Notice the water circulating and stud holes.

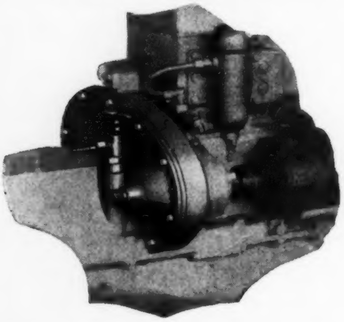
Universal
MOTOR CO.

The BLUE JACKET wi

Cylinders	4	Compression ratio	5½ to 1
Cycle	4	Firing Order	1-2-3-4
Bore	3″	R. P. M.	100 to 4000
Stroke	3½″	H. P.	45
Cu. In. Displacement	99	Weight, completely equipped	300



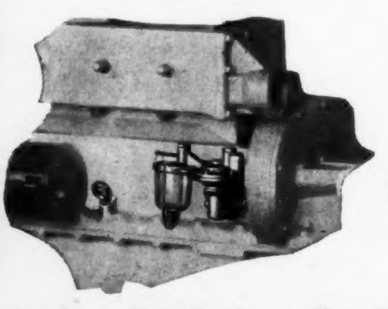
Access to valve mechanism is simple, as the manifold can be dropped by moving only four nuts. The valve tappet guides are removable and are held down in pairs by specially designed bridges. Adjusting screws of tool steel.



Standard equipment includes built-in band sump pump. Tachometer drive is S. A. E. standard.

Cylinders: In block. Separate from crankcase. Cast in the Universal foundry by a special process of chrome nickel alloy and iron. Honed to mirror finish. All cylinders and valves fully surrounded by water.

Cylinder head: High turbulence type special alloy aluminum. Cast in the Universal foundry. Specially ribbed to dissipate heat, preventing preignition. Head fastened to cylinders by eight studs to each cylinder.



Fuel Pump

Type AC automatic fuel pump is standard equipment. A bayonet type oil gauge is conveniently located.

Crankcase: Cast aluminum alloy. Specially ribbed to prevent distortion.

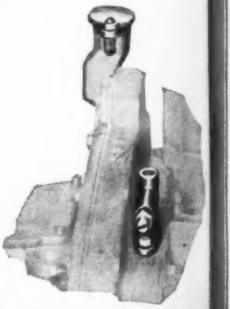
Oil base: Cast aluminum alloy.

Flywheel: Balanced on Gisholt Flywheel balancing machine.

Crankshaft: Five bearings. 100% counterbalanced. Drop forged. Dynamically balanced. End thrust taken at timing gear end, adjustable by shims.

Camshaft: Five bearings; rifle bored for oil distribution.

Bearings: Crankshaft bearings—1¾″ in diameter, babbitt lined in bronzed back. Camshaft bearings: 1¾″ diameter, hard bronze. Camshaft thrust taken at timing-gear end. Is adjustable by plunger and spring.



Oil pressure is readily adjustable by a by-pass valve conveniently located. The oil filler and breather is very accessible.

Connecting Rod: Forged Lynite aluminum.

An extra drive, operated from the camshaft, is provided for convenient hook-up of a governor, bilge pump or other accessory.

Pistons: Permite—of special design for correct heat distribution; cast-in strut. Three compression rings—one oil drain ring.

Piston Pin: Full floating, high manganese steel, case hardened. ¾″ diameter.

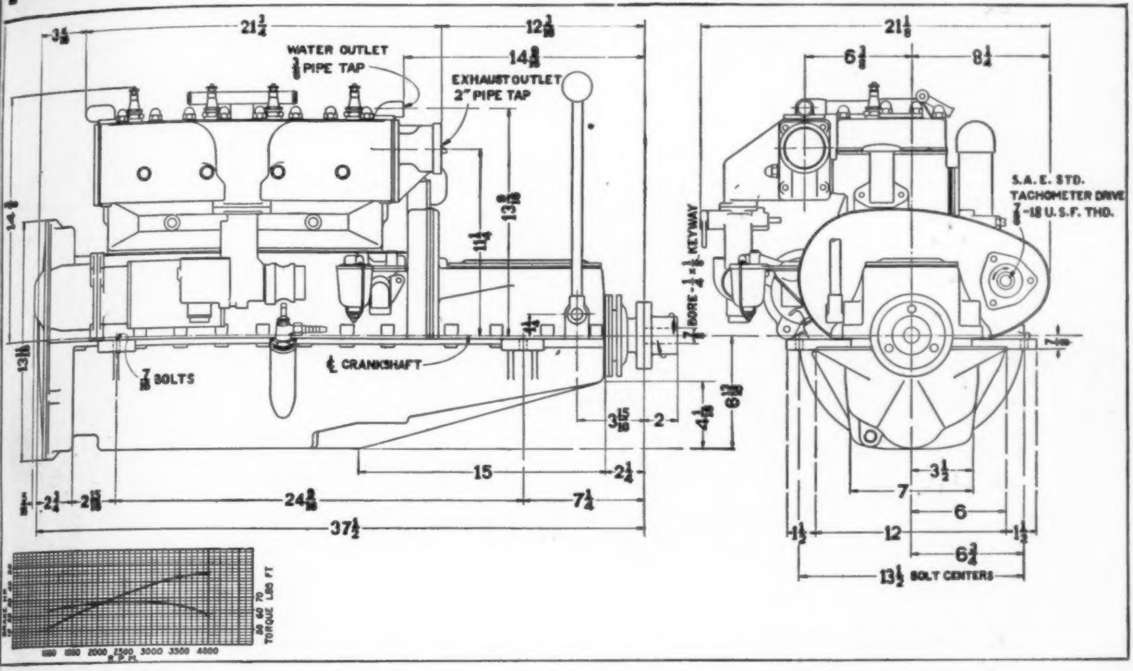
Valves: Extra large. 1 11/16″ diameter, lift 5/16″.

Exhaust Valves: Thompson silichrome; intake valves—Thompson nickel steel. Valve guides and valve tappet guides removable. Head of tappet adjusting screw, tool steel.

Timing Gears: Cam, idler, and oil pump gears special chrome nickel iron, running against non-metallic crank and generator gear with helical cut teeth and 1″ face.

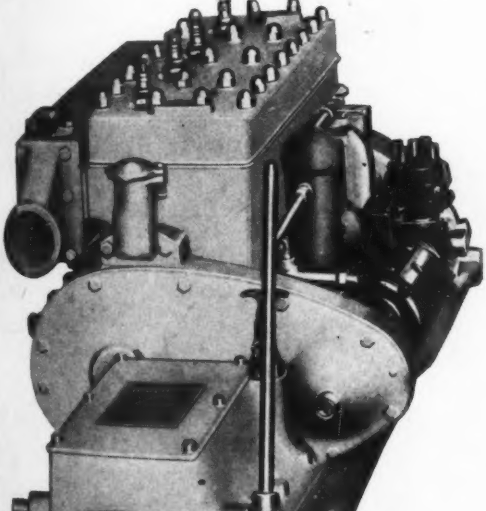
Manifold: Combination exhaust and intake manifold completely water-jacketed. Hot spot for intake.

pass muster in any test



21 3/4
3 5/16
12 1/16
14 9/16
WATER OUTLET 3/8 PIPE TAP
EXHAUST OUTLET 2" PIPE TAP
14 1/8
13 9/16
11 1/4
13 11/16
4 1/4
7/16 BOLTS
℄ CRANKSHAFT
3 15/16
2
15
2 1/4
2 1/4
2 15/16
24 3/16
7 1/4
37 1/2
21 1/8
6 7/8
8 1/4
S.A.E. STD. TACHOMETER DRIVE 7/8 -18 U.S.F. THD.
7/8 BORE - 1/4 x 1/8 KEYWAY
6 13/16
4 1/16
3 1/2
7
6
1 1/2
12
1 1/2
6 3/4
13 1/2 BOLT CENTERS
BRAKE H.P.
TORQUE LBS FT
R.P.M.
1500 2000 2500 3000 3500 4000

Lubrication: Full pressure lubrication throughout, even to piston pin bushings and timing gears. Oil pressure relief valve on the outside of crankcase for convenient adjustments. Built-in oil sump pump. Oil pressure pump in sump driven by crankshaft gear. Built-in oil filter and cooler of our own design, made entirely of brass and copper.

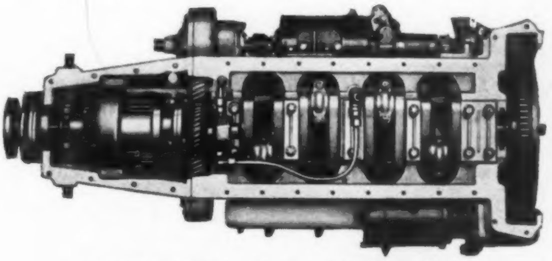


Stern view. Note the compact and efficient arrangement of all units.

Reverse Gear: "Joe's."

Cooling System: Gear type pump of Tobin bronze. Our own design.

Propeller Rotation: Standard models turn right hand propeller.



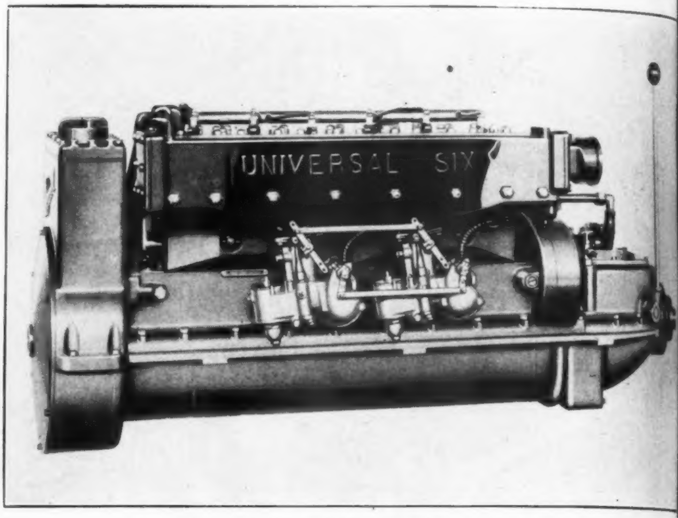
Bottom view with the oil pan removed, showing the five extra large crankshaft bearings. The built-in reverse gear is a late type "Joe's." The flywheel is dynamically balanced with a steel starter gear shrunk in place.

Ignition System: Six-volt, two-unit starting, lighting and ignition system, with automatic spark advance.

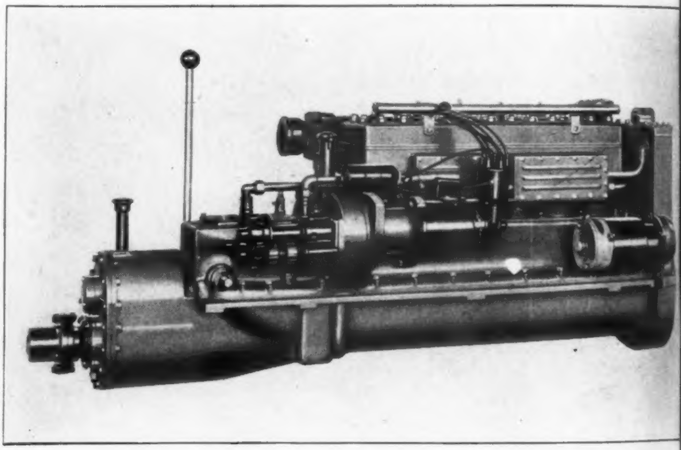
Standard Equipment: 1¼" Stromberg carburetor. Tachometer Connection, extra drive for governor or bilge pump. A.C. type fuel pump, built-in hand sump pump, reverse gear, oil cooler and filter; starting, lighting and ignition system (less battery), water circulating pump, instrument panel, thermometer connection.

More Power and greater refinements

the Six-77 the Six-88



The Universal Six-88, Direct Drive



A Universal Six with silent built-in Universal Reduction Drive. Ratios of 2¼ to 1 and 1¾ to 1 are supplied

Stepped up in power, equipped with a new and vastly improved type of oil cooler, fitted with a Universal designed non-distorting piston and with many other refinements, the Universal Sixes for 1930 represent the most up-to-the-minute design in the marine motor field.

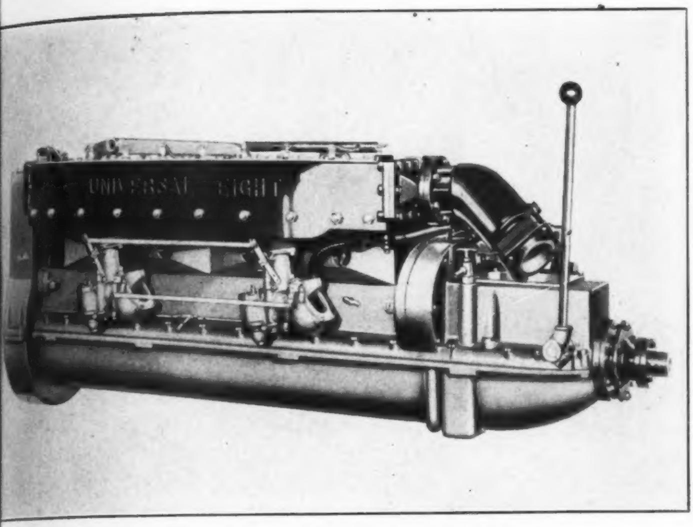
And they are marine motors, the only sixes in their class that are built for marine use exclusively. Keep that in mind in comparing them with other motors in their horsepower class that are conversions of automobile engines, designed to operate under radically different conditions.

Universal Sixes have won high praise for themselves during the past season—they took first, second, and third places in their class at the Gold Cup races in September. They can be relied upon to give even finer performance in the years to come.

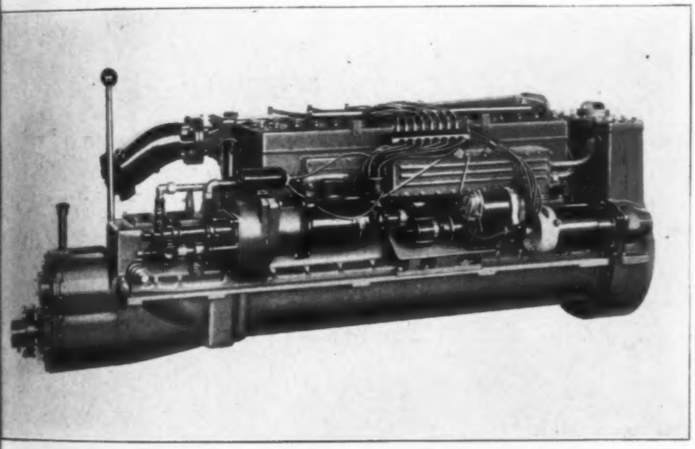
Cylinders - - -	6	R. P. M. -	100 to 3000
Cycle - - - -	4	H. P.	
Bore - - - -	3½	(Model Six-77) - -	77
Stroke - - - -	4½	(Model Six-88) - -	88
Cu. In. Displacement -	260		
FIRING ORDER:		*WEIGHT:*	
(Right hand motor)	1-4-2-6-3-5	(Direct drive model)	685
(Left hand motor)	1-5-3-6-2-4	(Reduction drive model)	920

Universal
MOTOR CO.

The only Straight Eight in its class designed and built exclusively as a marine motor



The Universal Straight Eight, 115 H. P.



The Eight with a Universal built-in Reduction Drive

Here is the only straight eight available in its class that is designed and built as a marine motor.

More power this year, but without any additional weight or any greater over-all size. In no other motor available can you cram so much smooth, vibrationless power into so small a space.

Like the Universal Sixes, the Eight-115 comes to you this year with several important improvements which spell longer life, lower maintenance, and less trouble for the owner.

ylinders	8
ycle	4
ore	3½
roke	4½
. In. Displacement	347
IRING ORDER:	
(Right Hand Motors)	1-6-2-5-8-3-7-4
(Left Hand Motors)	1-4-7-3-8-5-2-6
.P.M.	100 to 3000
.P.	115
EIGHT: (Direct Drive)	865
(Reduction Drive)	1100

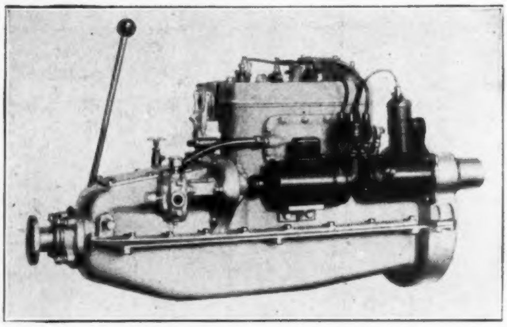
Universal
MOTOR CO.

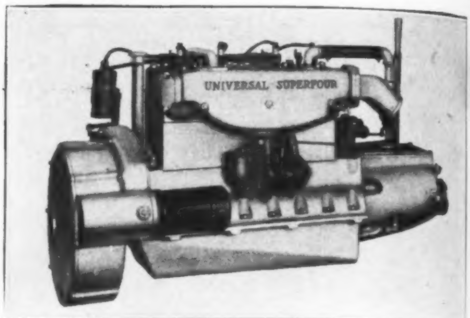
KEEPS APLUGGIN'

SINGLE CYLINDER 6-8 H. P.

You may never win any racing cups with the Universal Single Cylinder, but if you're looking for a thoroughly dependable, husky motor for a work or fish boat, and if six to eight horsepower will drive you—here's the ideal motor. Available with or without reverse gear, with or without reduction drive.

DEPENDABLE





the FLEXIFOUR

"Dependable"—that describes the Universal Flexifour to a "T".

For light, fast runabouts up to seventeen feet, for more leisurely launches and fishing boats, and for light cruisers under twenty-six feet, the Flexifour will give you dependable, smooth performance at low cost and for an exceedingly long life.

With the Universal Reduction Drive, the Flexifour is ideal for small work boats, fishing boats, and cruisers, where a speed of eight to twelve miles an hour is wanted. Flexifours are backed by years of noteworthy service all over the world. In its class you can't do better than to install a Flexifour.

the SUPERFOUR

One of the world's most popular all-purpose motors. Model GLH for fast runabouts, GLS for light cruisers and fishing craft. Reduction drive models for heavy fishing boats and cruisers. Both direct and reduction drive models are favorites for auxiliary. The Superfour for 1930 you'll find to be trimmer in appearance than ever before. But there was no need to make any changes in the basic construction of this famous motor.

Superfours are available in three sizes: the GLS at 35 Horsepower and the GLH at 45 Horsepower—either of which may be had with Reduction Drive; and the GLR, a 151 Class Racing Motor.

Universal Announces Three New Series Marine Type Electric Plants

The Flexifour 4-cylinder series in 1½ KW, 3 KW, 4 KW, and 5 KW sizes.

The Superfour 4-cylinder series in 7½ KW and 10 KW sizes.

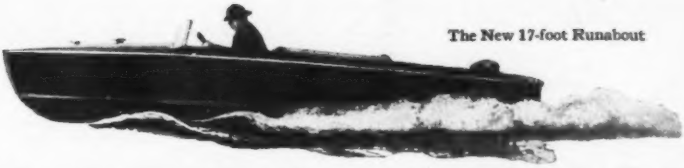
The Six-cylinder series in 10 KW, 15 KW, and 20 KW sizes.

Smoothness beyond belief is made possible by perfect balance. All crankshafts, flywheels and armatures are balanced on Gisholt Balancing Machines. Full pressure lubrication to all bearings assures long life. Every plant is a genuine marine job.

UNIVERSAL MOTOR COMPANY

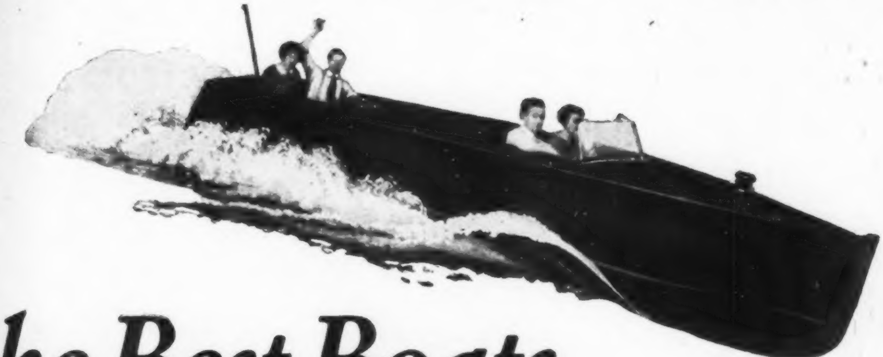
NOT CONNECTED WITH ANY OTHER FIRM USING THE NAME "UNIVERSAL"

OSHKOSH, WIS., U. S. A.



The New 17-foot Runabout

FAST! SMART! NEW!



—the Best Boats Dunphy ever built—

AT THE SHOW

DUNPHY has created a new excellence in fine boat building. For over 64 years, Dunphy has built seaworthy safety into boats. Now, Dunphy builds Style as well as Safety. The same comfort, the same magnificent strength, that have given Dunphy boats a reputation for three generations, with new, smart good looks.

The big deluxe runabout illustrated above is genuine African mahogany, both interior and decks. Its sleek, graceful lines tell you that it's eager to lead the parade. It is powered with 75 to 110 h. p. six and eight cylinder motors, which drive it smoothly and flexibly at 28 to 35 m. p. h. There is no "pounding". The frame work, of selected white oak, closely spaced, is unusually strong and reliable. The fastenings are all brass and copper. These factors mean extra economy, dependability and long life.

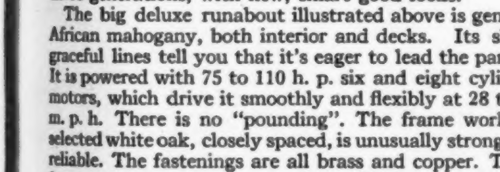
The six-cylinder models of this runabout are equipped with two double seats in the forward cockpit, as well as the regular roomy rear cockpit. Perhaps the most surprising thing about the boat is its exceptionally reasonable price, $1950 to $2350.

A 17 ft. Runabout—Not a Make-Over but a Custom-Built Motorboat for $1095

The 4-cylinder runabout at the top of this page is not converted or adapted from any other outboard or inboard. We decided to build a fast, good-looking, up-to-the-minute runabout priced within reach of everybody who loves the water. See this boat at the show. Compare it with other small motor boats in the same price range. Notice its extra high freeboard, its extra beam, its complete high speed motor. Compare its finish (African mahogany planking), and exact, careful workmanship. The same quality is carried out in unseen details. Fastenings are all copper and brass. The upholstery is expensive and durable. Notice how comfortable it is for five people. See how easily it can be slipped in and out of the water. Speed, 30 to 35. Price, $1095.

Safety

DUNPHY



BOAT MANUFACTURING COMPANY, EAU CLAIRE, WIS.

The 1930 Sand-Dab is a Six, instead of a four—illustrated at the left. This is the boat to get into places where ordinary motorboats can't go! A new improved tunnel gives you perfect operation in only 12" of water. No trouble in reversing. 26 to 31 m. p. h. All mahogany planked, ***double planked bottom,*** day-long comfort $1575 and $1675.

AMERICA'S LEADING MARINE ENGINES

(Continued from page 240)

MAKE AND MODEL	Horse Power	Bore & Stroke	No. of Cyl.	R.P.M.	Weight	Lubrication	Reverse Gear	Starting Device	Ignition System	Spark Plugs	Carburetor
STERLING **Buffalo, N. Y.**											
Neptune	15	5½ x 7	2	500	1150	Pr	Own	NE	NE	Ch	Sch
Chevron	85	5½ x 6¾	6	800	2710	Pr	Own	NE	NE	Ch	Sch
Chevron	130	5½ x 6¾	6	1200	2100	Pr	Own	NE	NE	Ch	Sch
Chevron	150	5½ x 6¾	6	1500	2100	Pr	Own	NE	NE	Ch	Sch
Dolphin, Med.	165	5¾ x 6¾	6	1200	2360	Pr	Own	NE	NE	Ch	Sch
Dolphin, Med.	220	5¾ x 6¾	8	1200	3500	Pr	Own	NE	NE	Ch	Sch
Dolphin	225	5¾ x 6¾	6	1550	2300	Pr	Own	NE	NE	Ch	Sch
Dolphin	300	5¾ x 6¾	8	1550	3500	Pr	Own	NE	NE	Ch	Sch
Dolphin, Spec.	290	5¾ x 6¾	6	1950	2275	Pr	Own	NE	NE	Ch	Sch
Petrel	125	4⅞ x 6	6	1500	1350	Pr	Own	NE	NE	Ch	Sch
Petrel	115	5¼ x 6	6	1200	1500	Pr	Own	NE	NE	Ch	Sch
Petrel	145	5¼ x 6	6	1500	1500	Pr	Own	NE	NE	Ch	Sch
Petrel	180	5¼ x 6	6	1800	1500	Pr	Own	NE	NE	Ch	Sch
Petrel	200	5¼ x 6	6	2100	1500	Pr	Own	NE	NE	Ch	Sch
Petrel—Red. Gear	190	5¼ x 6	6	675	2830	Pr	Own	NE	NE	Ch	Sch
Coast Guard	225	6¼ x 7¾	6	1200	4100	Pr	Own	NE	NE	Ch	Sch
Coast Guard	300	6¼ x 7¾	6	1500	3520	Pr	Own	NE	NE	Ch	Sch
Viking II	190	8 x 9	6	600	6950	Pr	Joes	NE	NE	Ch	Sch
Viking II	300	8 x 9	6	900	6950	Pr	Joes	NE	NE	Ch	Sch
Viking II	425	8 x 9	6	1200	6950	Pr	Joes	NE	NE	Ch	Sch
Viking II	250	8 x 9	8	600	8500	Pr	Joes	NE	NE	Ch	Sch
Viking II	400	8 x 9	8	900	8500	Pr	Joes	NE	NE	Ch	Sch
Viking II	565	8 x 9	8	1200	8500	Pr	Joes	NE	NE	Ch	Sch
20TH CENTURY **Morris Heights, N. Y.**											
60	60	6½ x 8½	4	500	3400	Pr	Joes	LN	Bo	Ch	Str
100	100	6½ x 8½	6	600	4500	Pr	Joes	LN	Bo	Ch	Str
UNITED STATES **Oshkosh, Wis.**											
Falcon 5	5	3¾ x 4½	1	1000	215	Spl	Par	Hand	Bo or Wi M	Ch	Til
Falcon 10	10	3¾ x 4½	2	1000	320	Spl	Par	Hand or Au	AK or M or Au	Ch	Til
Falcon 15	10–15	2½ x 3½	4	2400	268	Pr	Par	NE	AK or M or NE	Ch	Til
Falcon 40	40	3⅛ x 4¾	4	2300	425	Pr	Par	Au	Au	Ch	Til
Falcon 50	50	3⅛ x 3⅞	6	3000	575	Pr	Par	Au	Au	Ch	Til
UNIVERSAL **Oshkosh, Wis.**											
Blue Jacket	45	3 x 3½	4	4000	300	Pr	Joes	Au	Au	Ch	Str
***Flexifour N**	15	2⅝ x 4	4	2000	373	Pr	Own	Cr & Au	B & M	Ch	Str
***Superfour GLS-Med.**	35	3¼ x 4½	4	2400	425	Pr	Joes	Au	B & M	Ch	Str
***Superfour GLH-High Sp.**	45	3¼ x 4½	4	3000	425	Pr	Joes	Au	B & M	Ch	Str
Superfour GLR—Racing	50	3¼ x 4½	4	3000	300	Pr	None	Hand	B & M	Ch	Zen
***WM**	8	4⅜ x 4	1	1200	275	Cir & Spl	Joes	Hand	Wico	Ch	Til
***6-77**	77	3½ x 4½	6	2700	635	Pr	Joes	Au	B & M	Ch	Str
***6-88**	88	3½ x 4½	6	3000	635	Pr	Joes	Au	B & M	Ch	Str
***8-115**	115	3½ x 4½	8	3000	700	Pr	Joes	Au	B & M	Ch	Str
AB	45	3 x 3½	4	4000	300	Pr	Joes	Au	B & M	Ch	Str
W	8	4⅜ x 4½	1	1200	295	Spl	Joes	....	M	Ch	Til
VAN BLERCK JUNIOR **Red Bank, N. J.**	25	2¹¹⁄₁₆ x 3½	4	3000	165	Pr	Joes	Au	Au	AC	Til
WINTON **Cleveland, Ohio**											
W6	80	6½ x 9	6	500	5900	Pr	Own	Air	R Bo	....	Zen, Sch or Str
W5	125	8 x 11	6	450	10000	Pr	Own	Air	R Bo	....	Zen, Sch or Str
11	200	9½ x 14	6	425	19000	Pr	Own	Air	R Bo	....	Zen, Sch or Str
106-A	250	7¼ x 8	6	1200	5000	Pr	Joes	Air or LN	R Bo	....	Zen, Sch or Str
124-6	180	6 x 7	6	1300	2600	Pr	Joes	Air or LN	R Bo	....	Zen, Sch or Str
124-4	120	6 x 7	4	1300	1950	Pr	Joes	Air or LN	R Bo	....	Zen, Sch or Str
120-6	350	7½ x 8½	6	1350	5000	Pr	Joes	Air or LN	R Bo	....	Zen, Sch or Str
120-8	500	7½ x 8½	8	1300	6100	Pr	Joes	Air	R Bo	....	Zen, Sch or Str
130-6	375	8 x 10	6	1100	8000	Pr	Joes	Air	R Bo	....	Zen, Sch or Str
130-8	500	8 x 10	8	1100	10425	Pr	Joes	Air	R Bo	....	Zen, Sch or Str
154-12	700	7½ x 8½	12	1300	11800	Pr	Joes	Air	R Bo	....	Zen, Sch or Str
GAR WOOD **Detroit, Mich.**											
T-30	425	5 x 7	12	1950	1500	Pr	Joes	Own	DR	Ch	Zen
TS-30	525	5 x 7	12	2150	1550	Pr	Joes	Own	DR	Ch	Zen
WRIGHT **Paterson, N. J.**											
TM5 (4.8-1)	500	5¾ x 6¼	12	1900	1860	Pr	Own	LN	Dual-ScM	BGIXB	Str
TM5 (5.3-1)	575	5¾ x 6¼	12	2000	1860	Pr	Own	LN	Dual-ScM	BGIXB	Str
TM5 (6.5-1)	650	5¾ x 6¼	12	2000	1860	Pr	Own	LN	Dual-ScM	BGIXB	Str

*Can be furnished with reduction gear.

Key to Equipment Symbols

AK—Atwater Kent
Au—Autolite
Be—Bethlehem
Bo—Bosch
Bi—Bijur
B—Battery
Car—Carlyle
Ch—Champion
Cir—Circulation
Cr—Crank
DR—Delco-Remy
Dis—Distributor
Dr—Drip
Dy—Dyneto
Ei—Eisemann
El—Electric
Gr—Gravity
HD—Heavy Duty
HS—High Speed
Hol—Holley
John—Johnson
Kn—Kingston
LN—Leece Neville
M—Magneto
May—Mayer
Ma. & Br.—Make and Break
Me—Mechanical Oiler
Mil—Miller
McC—McCord
NE—North East
Opt—Optional
Par—Paragon
Pr—Pressure
Pu—Pump
Ra—Rajah
Sc—Scintilla
Sch—Schebler
Spec—Special
Spl—Splash
Sd—Splitdorf
Ster—Sterling
St—Stewart
Str—Stromberg
Til—Tillotson
Wi—Wico
Zen—Zenith

DEE-WITE RECOMMENDS DUPLEX

The Dwight Lumber Company, of Detroit, Michigan, to insure most efficient performance from their new Dee-Wite boats and maximum satisfaction to their owners, makes a practice of attaching a bronze plate on each hull recommending that Duplex Marine Engine Oil be used to insure best performance from the motors at all times. Further instructions are also supplied in connection with proper lubrication, inasmuch as the Dwight Company realizes the important part correct lubrication plays in engine operation.

NEW HARDWARE CATALOG

A new marine hardware catalogue combined with valuable information for the yachtsman will be issued at the Show.

This new handy reference book and marine hardware catalogue will also have the new corrected list prices that are the approximate retail prices on each item. Now anyone can tell what the approximate price on any article is. This will surely be a blessing for all yachtsmen.

The reference book and catalogue are issued by Wilcox, Crittenden & Co. Inc., Middletown, Conn.

ICHABOD T. WILLIAMS & SONS

1838

Valuable Information Regarding
MAHOGANY and TEAK

1930

MAHOGANY

Sir Walter Raleigh 333 years ago used MAHOGANY for the first time in ships, by repairing his vessels while on a trip to the West Indies. Later the Spaniards used MAHOGANY as a major wood not only in constructing their merchant vessels, but battleships as well. History reveals that the English during the eighteenth and nineteenth centuries constructed their ships wholly or partially of MAHOGANY. The reasons advanced were that:

> "It was lighter, stronger, more durable, did not splinter or become fuzzy when immersed in water."

These predominating good qualities of MAHOGANY for the construction of boats are again recognized by its selection as the wood to be used in the construction of one of the yachts now being built for the elimination races, from which the final selection will be made of the yacht that will be selected to defend the International Cup in the Fall of 1930.

The committee or syndicate building this yacht, after the most careful and complete study of all materials, decided that MAHOGANY was the best, and from it could be constructed the very finest yacht that this country could produce.

You are entitled to the best obtainable material for your boat. Insist on obtaining GENUINE MAHOGANY. Do not accept substitutes. There is a plentiful supply of GENUINE MAHOGANY obtainable at reasonable costs.

The slightly higher cost of the genuine article as against the use of cheaper or inferior material makes little difference in the total cost of the completed vessel.

Today, after most rigid tests, MAHOGANY still retains its leadership in the construction of yachts, cruisers, speed boats, etc.

TEAKWOOD

TEAKWOOD, possessing as it does, weather-resisting qualities, owing to the natural oil contained in the wood, has proved itself the finest of all woods in the world for yacht or ship-building purposes, in places exposed to the weather.

It was found, in the recent scrapping of some of the old United States Navy ships, that the iron fastenings imbedded in teakwood thirty or more years ago were in perfect condition, while similar iron fastenings where exposed to the weather or imbedded in other woods were one-half the size of the original fastening as the result of rust. There is no natural acid in TEAKWOOD to attack iron or copper fastenings. The oil in teak actually protects metals in contact with this wood.

Little more need be said on this subject, as these facts are too well known by all practical ship, yacht, and boat-building plants.

There is another use for TEAKWOOD not so generally known, namely, for cabinet work and interior decoration. Beautiful effects are obtained by the use of figured teak, which owing to the qualities of this wood, will stand the unusual climatic and weather strain better than any other wood.

Carrying the largest stock of TEAKWOOD in the United States enables us to serve our customers to their best advantage for any purpose for which they may desire to use this beautiful wood.

We shall be glad to furnish on request a list of fine examples of the use of TEAKWOOD for both interior and exterior purposes.

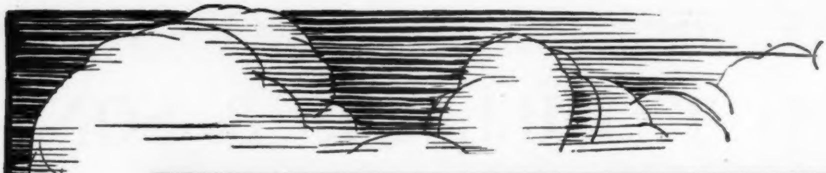
We carry large stocks in all thicknesses, all varieties, well seasoned, MAHOGANY and TEAKWOOD, manufactured expressly for the boat building trade. Our customers profit by our up-to-date and modern facilities for manufacturing, coupled with our 91 years of experience in handling MAHOGANY and numerous other imported as well as domestic hardwoods. A standard unequalled elsewhere.

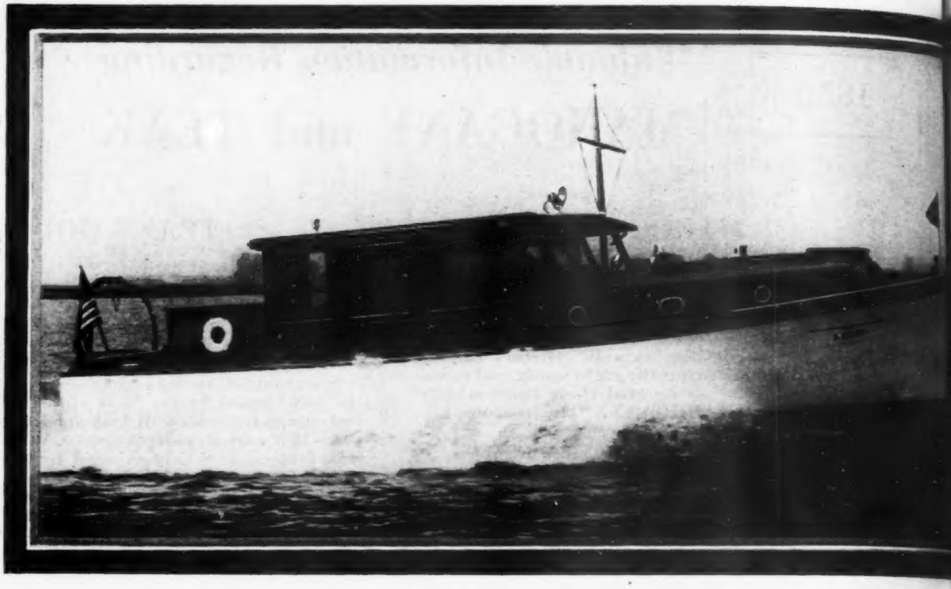
Let us assist you in your problems of wide widths and long lengths where choice stock is demanded. Write us for prices.

ICHABOD T. WILLIAMS & SONS

220 ELEVENTH AVENUE
NEW YORK CITY

CHICAGO OFFICE
910 S. Michigan Avenue, Chicago, Ill.

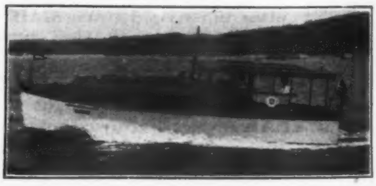




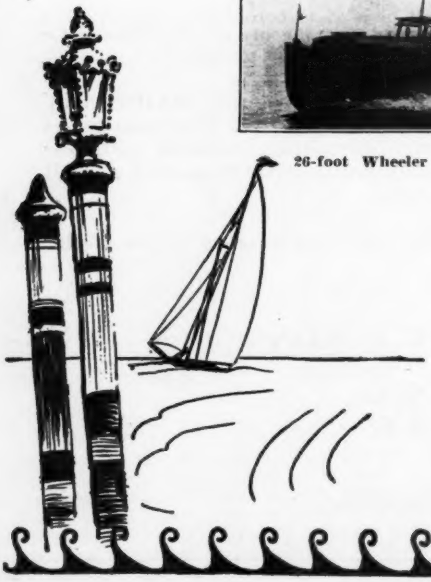
The new 1930 WHEELER "PLAYMATES," in design, craftsmanship and materials, set standards that have never been approached. They are strikingly beautiful, sturdily built, luxuriously appointed and, above all, they give you the greatest possible protection under all conditions. WHEELER boats completely satisfy the sportsman's demand for spirited performance and unsurpassed value.

The well-known WHEELER standards of perfection have never been better exemplified than in the new 1930 models. The models include special 22-foot Sedan, and prices range from $1,950.00 to $19,500.00.

26-foot Wheeler "Playmate"



29-foot Wheeler "Playmate"



DO NOT FAIL TO VISIT

Playmate Harbor

(Booths A6 and E)
at the
NEW YORK MOTOR BOAT SHOW

New "Playmates"

1930 models

36-foot Combination Sedan Cruiser

The matchless beauty of this Model, its sleek, smart, racy appearance, coupled with its power, speed and unusual refinements, will definitely establish its unchallenged popularity in 1930. Available also in 33-foot, 40-foot and 47-foot; single and twin screw. Full accommodations for six cruising. Most attractive prices.

1930 MODELS

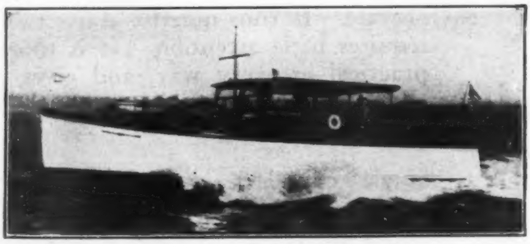
39'11"	x 11'	—Single, Sedan and Double Cabin Models
36'	x 10'	—Single, Sedan and Double Cabin Models
33'	x 9'6"	—Single and Double Cabin and Sport Models
29'	x 9'3"	—Single and Short Cabin and Sedan Models
26'	x 8'2"	—Single and Short Cabin and Sedan Models
22'	x 7'	—Sedan and Open Models

$1950.00 — $12,750.00

47'	x 12'	—New, Custom design, Single and Twin Screw

Prices on Application

33-foot Wheeler "Playmate"



40-foot Wheeler "Playmate"

WHEELER SHIPYARD

DISTRIBUTION POINTS:

Boston....................................Noyes-Stearns Marine Co.
Syracuse..................C. E. Brown, James St. & Oswego Blvd.
Houston...............Tracy Parks, Second National Bank Bldg.
Miami..............Couzens & Daly, 29 Hotel McAllister Arcade

Write for new Catalog "A"

WHEELER SHIPYARD

Foot Harway Avenue, BROOKLYN, N. Y.

Tel.: MAYflower 7000

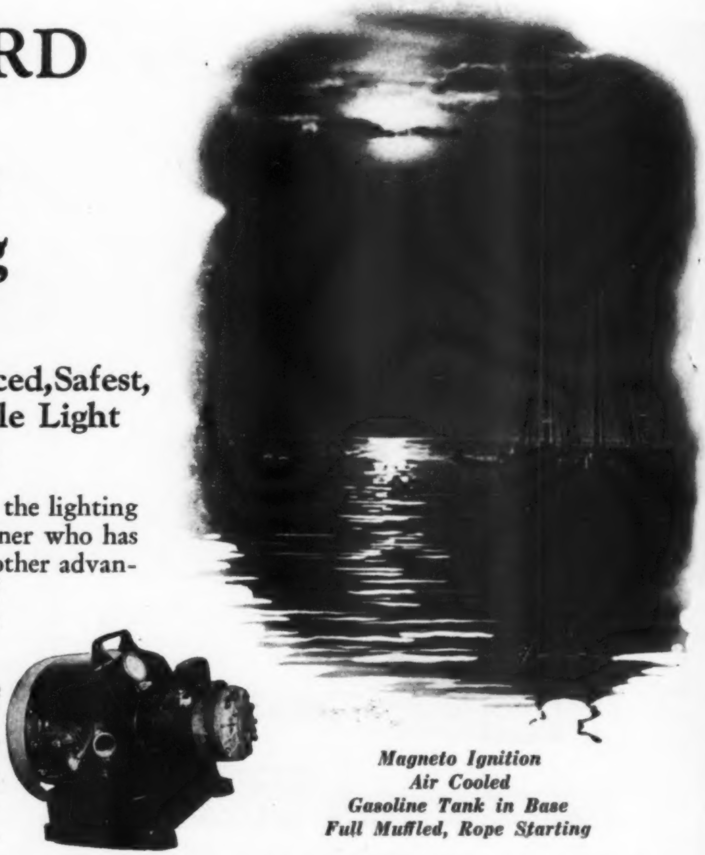
Next to MOONLIGHT

THE
BRANFORD
"MIDGET"
Electric Lighting Plant

Produces the Lowest-Priced, Safest, Brightest, Most Reliable Light You Can Get

The BRANFORD Plant solves the lighting problem for the small boat owner who has been denied electric lights and other advantages of electricity because of the excessive weight and cost of the plants required.

This remarkable little machine requires only 12 x 18 inches of floor space and weighs only fifty pounds. It consists of an electric generator directly connected to a small gasoline motor.



Magneto Ignition
Air Cooled
Gasoline Tank in Base
Full Muffled, Rope Starting

Price for complete 6-volt system **$140**

12-volt system $145

No cumbersome and costly battery installations are needed. You simply wire the Branford Generator to your present starting battery, or if you have no motor, or your engine is not equipped with a starter, any good $10 storage battery will give the required service, *and with this plant the batteries can be kept fully charged at all times.*

The BRANFORD Plant costs little to operate. It runs quietly, starts easily and requires little attention. It is thoroughly practical in every way, and gives you at all times an independent, reliable source of electricity.

Single cylinder air cooled motor with magneto ignition. Gasoline tank in base. Starts by rope. Is fully muffled. High efficiency totally enclosed generator with ample capacity for all purposes. Equipped with automatic cut out and ammeter.

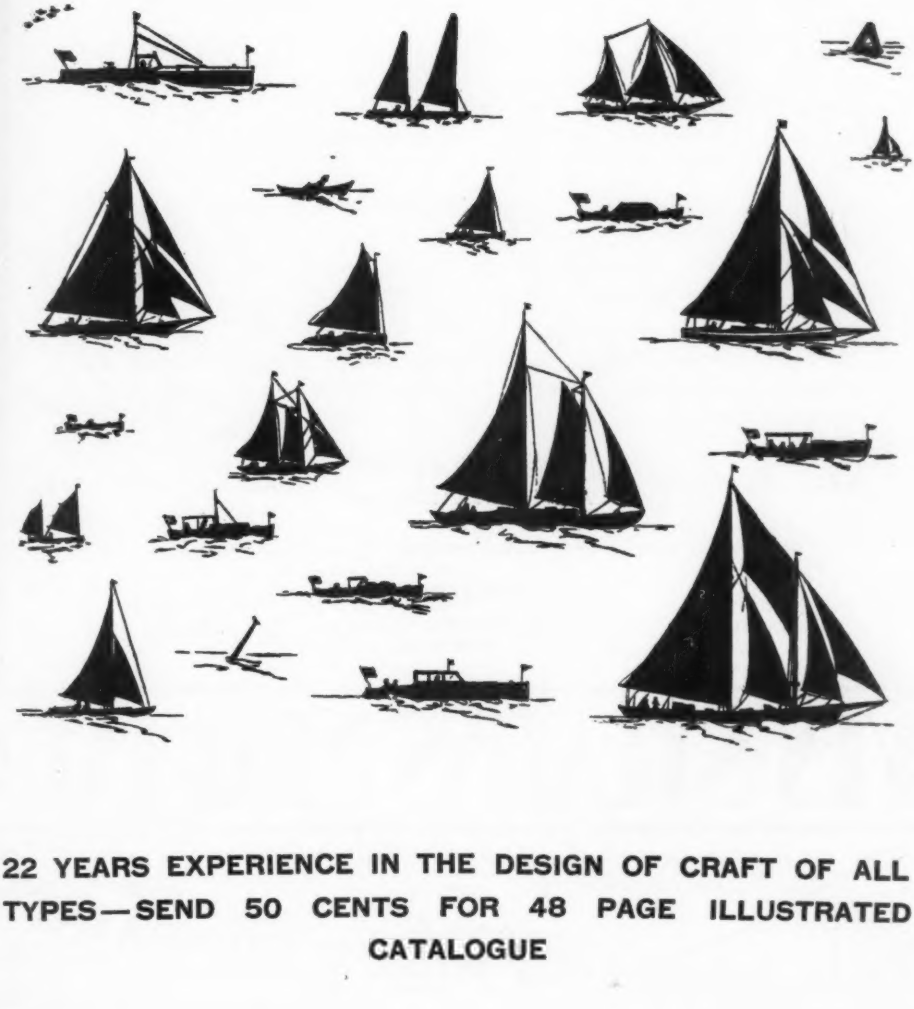
Write now for descriptive circular

THE E. J. WILLIS CO., 85 Chambers Street, New York
Exclusive Marine Distributors

Manufactured by

MALLEABLE IRON FITTINGS CO.
BRANFORD, CONN.

WILLIAM ATKIN
NAVAL ARCHITECT



22 YEARS EXPERIENCE IN THE DESIGN OF CRAFT OF ALL TYPES—SEND 50 CENTS FOR 48 PAGE ILLUSTRATED CATALOGUE

HUNTINGTON, N. Y.

BOSTON'S LARGEST MARINE ORGANIZATION

offers you a complete New England-wide

BOAT SERVICE—SECOND TO NONE!

THE first thought of every boat buyer today should be service—that all important factor upon which depends the full enjoyment of a boat purchase.

We now offer to boat owners and prospective buyers service facilities on a par with those of the automobile—made possible by a branch and dealer organization which blankets the entire coastline and inland waters of the six New England states.

If you are planning to use your boat in New England waters, or are considering the purchase of a boat for use in this section, our representatives will be at the Motor Boat Show—ready and glad to discuss your requirements with you.

A.C.F. Cruisers

CHRIS-CRAFT
Runabouts and Cruisers

Wheeler Playmates

Gas and Diesel Engines — Brokerage and Financing — Equipment

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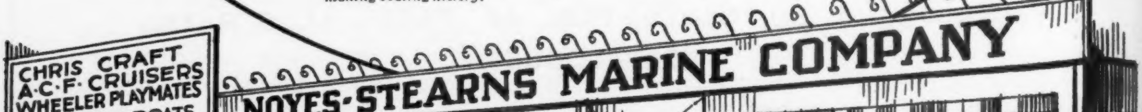
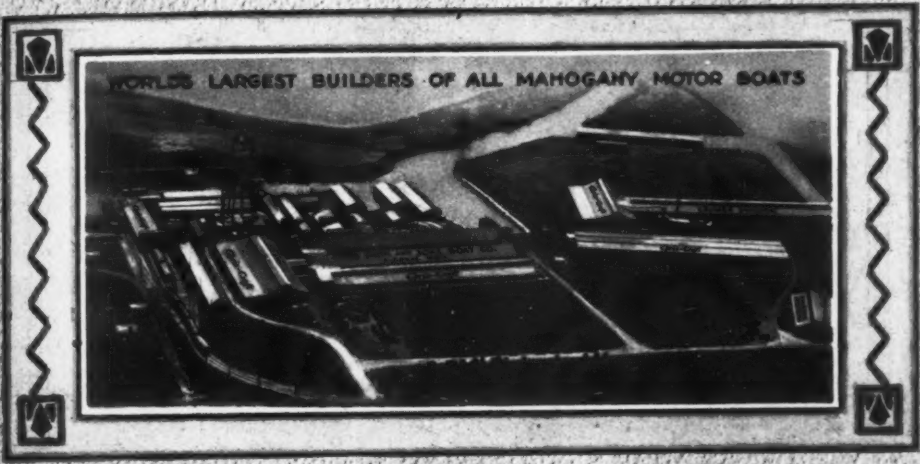
338 Pearl St.
HARTFORD

NOYES-STEARNS MARINE Co

First and only established waterfront headquarters in the heart of downtown Boston. Our commuters' service is making boating history.


CHRIS CRAFT
A·C·F· CRUISERS
WHEELER PLAYMATES
OUTBOARD BOATS and MOTORS
SAIL BOATS-YACHT TENDERS
NOYES-STEARNS MARINE COMPANY
COMMUTERS
SERVICE
Chris-Craft
LESTER FAGANS

The
World's Largest Builders of
All-Mahogany Motor Boats


WORLD'S LARGEST BUILDERS OF ALL MAHOGANY MOTOR BOATS

Present their new

1930 FLEET

of

24 MODELS

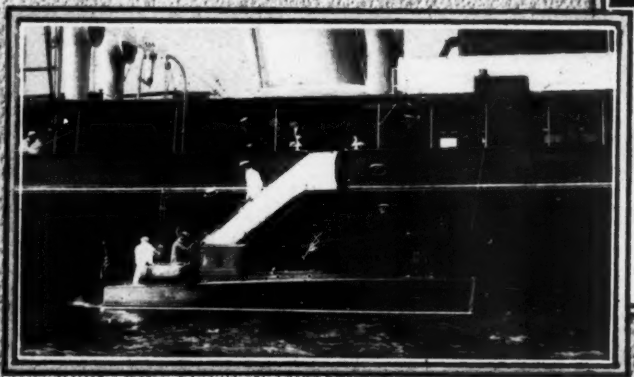
Chris-Craft

WATERWAYS ARE HAPPY WAYS

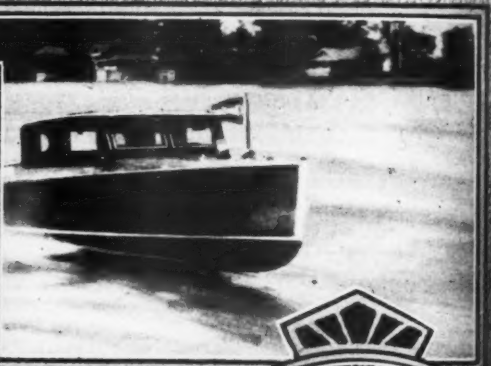
Homeward bound after a glorious holiday on the water—what an added joy, if the journey's made in a Chris-Craft!

You can get the big ones if you have a Chris-Craft to take you swiftly across the waters to their hiding places

Chris-Craft



A large portion of the world's finest yachts carry Chris-Craft tenders—proof of their seaworthiness and matchless quality



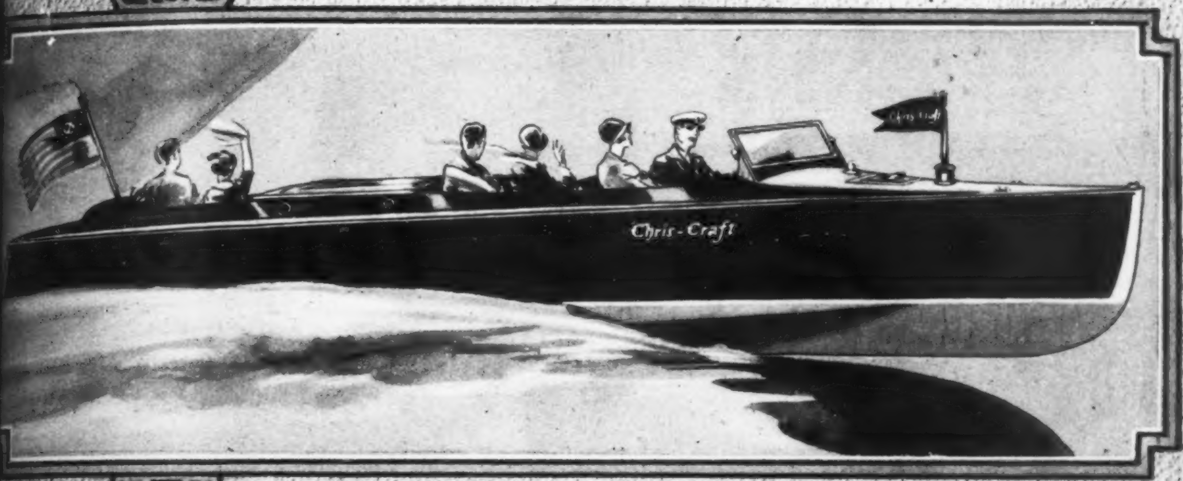
Start your business day gloriously with a swift Chris-Craft ride in to business—a sure tonic for mind and body alike

Winning with a winner. A Chris-Craft always sets the pace in any motorboat company. The trophies won by Chris-Crafters prove

Where sky and water meet. A Chris-Craft is the accepted way to transfer from the landing to sea or amphibian planes

A NEW CHRIS-CRAFT

The 20-Foot Runabout



TRIUMPHANT from a long series of water tests comes a new 20-foot Chris-Craft built to please the public as no twenty footer has ever done—to give the water lover a new conception of smartness, seaworthiness and speed.

Here at last is big boat performance and safety in the trimmest, safest small craft that ever left a designer's board. Here are deep, luxurious cushions and roomy seats for eight. Here is flexibility and driving control unmatched by any craft of any size.

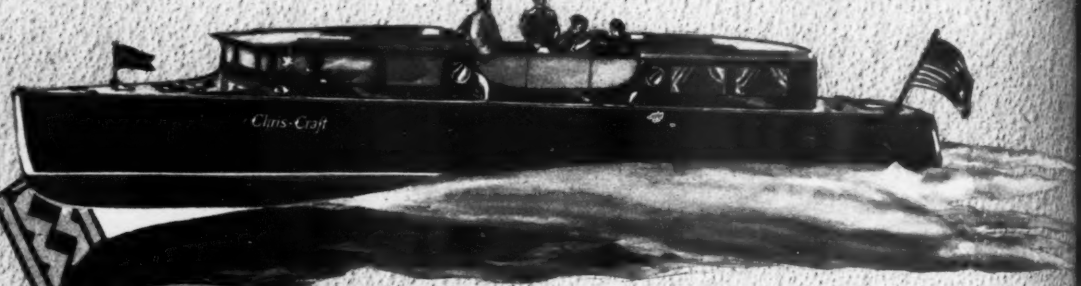
You will marvel at the ease with which it may be taken away from dock or float, turned within its own length, stopped, reversed and sent away again like a rocket.

The inherent stability and safety for which the larger Chris-Craft is world famous have been engineered into this smart, compact, fast personal runabout only 20 feet in length. It is a dry boat with plenty of beam. The smoothest riding small boat in all the blue waters.

Finger tip control centers in the handsome lighted automobile type dash which groups ammeter, tachometer and oil gauge. Near by is horn and choke. Moderately priced at $1895, this true Chris-Craft is powered with a remarkably flexible 75 h. p. marine motor. Under perfect control at all times, model 100 has a 31 mile per hour speed.

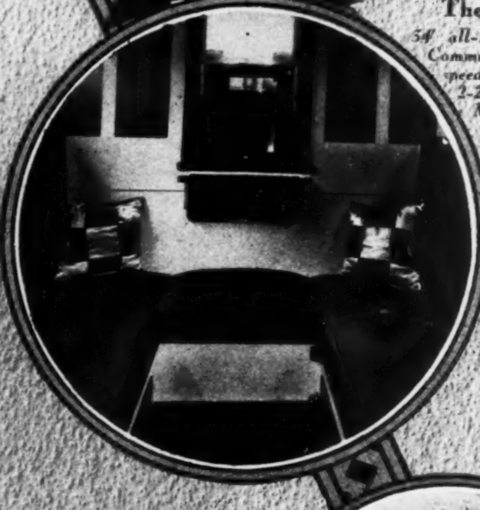
The FASTEST and SMARTES

The Ultimate i



The Commuter

34' all-mahogany Custom Commuter, 14-passenger, speed up to 40 M.P.H. 2-200 H.P. Marine Motors. $15,000.00



Luxurious seats, comfortable berths

This cruiser handles like its little brother—the fast runabout

NOW you may do more of the things you have wanted to do, go to places you have alway to see, entertain favored guests in superb luxury. Thre Chris-Craft, a commuter, a cruiser and a yacht, pla your disposal big ship performance, with high heavy seas. Here are water craft so easy to control boy can handle them. They are all-mahogany Chr with luxurious cabins, completely found, with china linen, cooking equipment, bath, stove, refrigera Everything is included. Dependable high power and genuine Chris-Craft construction means with on-schedule reliability.

The Commuter

Forty miles an hour is Chris-Craft's answer to the affairs who has repeatedly sought a means of travel from business that would conserve his time and give real rest as he travels.

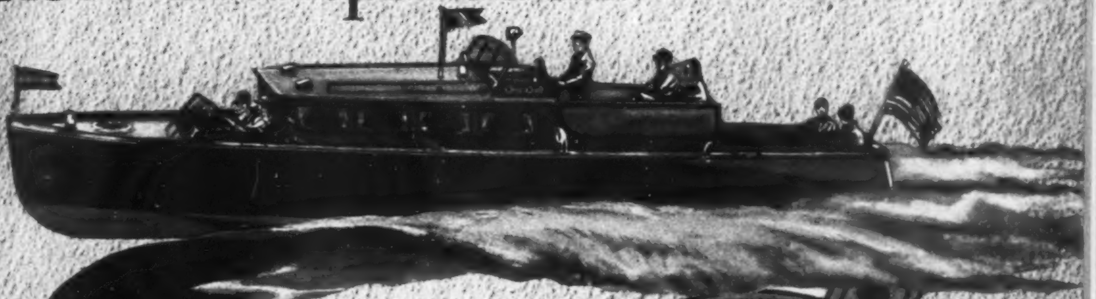
This all-mahogany, thirty-four foot commuter is as a motor car on the pavement. It offers luxurious privacy, rest and relaxation enroute. One may dress or hold business conference in complete Two cabins and open bridge offer variety of view and tainment. One arrives home full of energy, ready for enjoyment of home or social activity. Complete equ fortable service and cooking is included. It has toilet and man berths—carries fourteen in comfort at 40 miles

The Yacht

48' all-mahogany Yacht, 50 passenger, speed up to 50 M.P.H. 2-250 H.P. Chris-Craft Marine Motors $35,000.00

ST CRUISERS AFLOAT

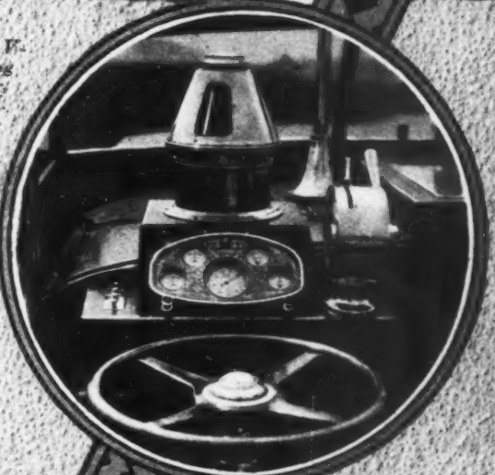
in Luxurious Transportation



The Cruiser

38' all-mahogany, V-bottom Commuting Cruiser, 20 passenger, speed up to 50 M.P.H. 250 H. P. Chris-Craft Marine Motor . . . . $15,000.00.

O nimble and fast is this roomy 38-foot commuting cruiser that a few minutes will take you completely y from feverish business, boresome folk, congested hways. You may entertain distinguished guests or carry nds or family in approved style to club or regatta. ris-Craft is the new vogue in exclusive entertainment. is the one means to secure your own pleasures to your- f in complete privacy. Open forward cockpit, luxurious n, bridge deck and rear cockpit offer variety for all ods. Thirty mile speed from the famous Chris-Craft rine motor gives you wide cruising range. Nature's door open wide. Waterways are happy ways. This cruiser is means to enjoy them to the utmost.

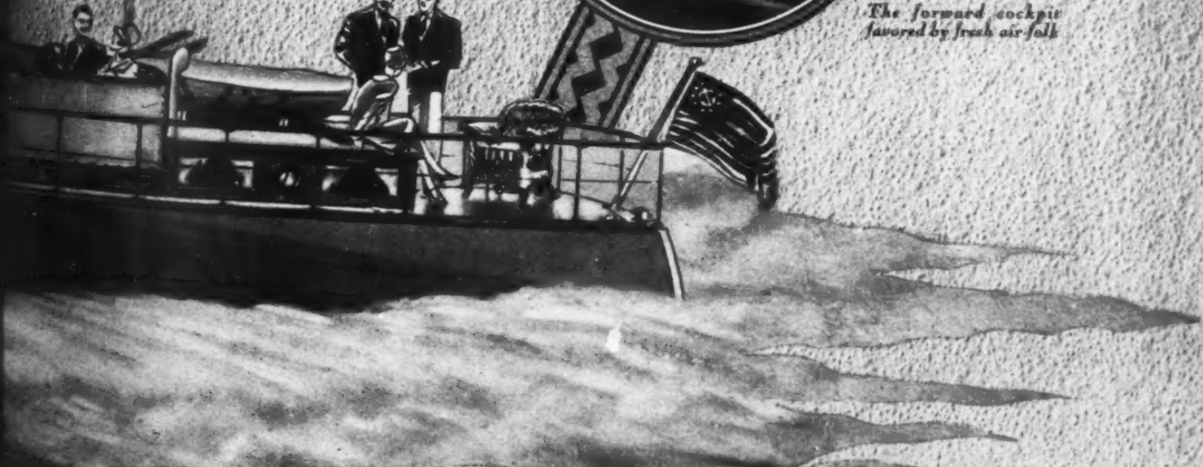


All controls at finger tips

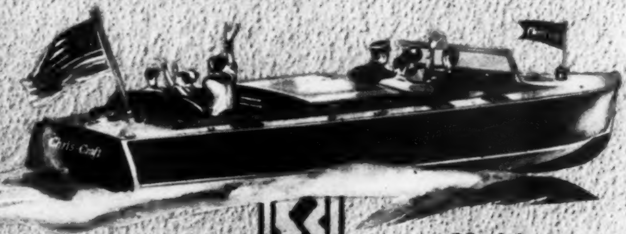
The Yacht

ere is the finest Chris-Craft ever launched, fitting flag- p of the 1930 Chris-Craft fleet. Eager buyers acclaim he most magnificent contribution to fine boat construc- n in a century. It is a craft to tempt those who are customed to leadership, afloat or ashore. Every glance veals new beauty, new smartness, new luxury in the loon, the fore and aft cabins and on open deck. It has full ing accommodations for eight persons with comfortable ting for thirty. Two powerful 250 h. p. Chris-Craft otors give thirty mile speed. The finest of yacht clubs d the open sea are its natural home. Thirty is the year's oductions. Many are already sold. Early inquiry is ad- ed if you would own this greyhound of yachts.

The forward cockpit favored by fresh air folk

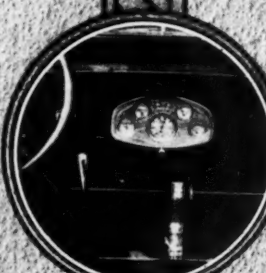


SPEED WITH SAFETY~~

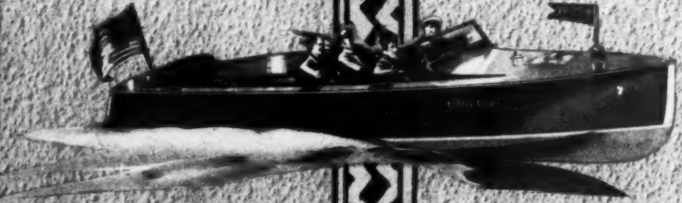


Model 102

22' all-mahogany Runabout, 9-passenger, speed up to 36 M.P.H. 125 H.P. Marine Motor $2595.00



Illuminated Instrument Panel as in fine motor cars



Model 103

24' all-mahogany Runabout, 10-passenger, speed up to 35 M.P.H. 125 H.P. Marine Motor $2850.00

Waterways are happy ways

Model 111

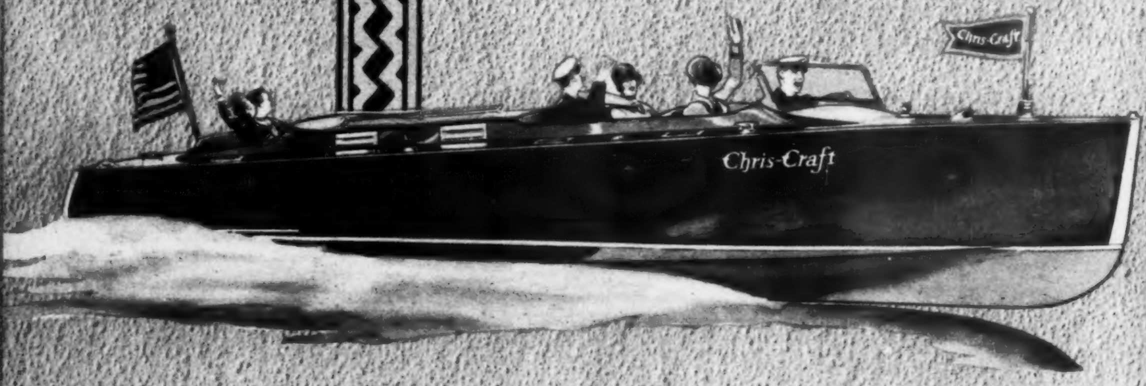
26' all-mahogany Runabout, 11-passenger, speed up to 45 M. P. H. 250 H.P. Chris-Craft Marine Motor $4750.00

THIS Model 102 Chris-Craft, one of the famous 22-f all-mahogany runabouts, will carry a party of 9 in crowded comfort at 36 m. p. h. Yours to command time for long delightful hours of water-born sp travel, it has all the luxury and ease of handling th made Chris-Craft the choice of the world. Powered w a 125 h. p. marine motor, and priced at $2595, a tribute to Chris-Craft's designing and building g Model 101 with 30 mile speed is $2195.

For those desiring a larger Chris-Craft, the Model 103 a favorite. Twenty-four feet overall, it offers added and greater passenger capacity, for 10 persons may its comfortable cockpits and 35-mile-an-hour speed cushioned luxury. Like all Chris-Craft, the 24 f noted for its safety, and almost unbelievable ease of handling. Have your Chris-Craft merchant let you drive th beautiful boat. Imagine the thrill of joy you'll feel wh ever your friends ride with you. At $2850, with 125 h motor—a wonderful boat! Model 105 is a 26 foot 125 h. p., 32 miles per hour, carrying 11 passengers, $3200. Model 106 is a 155 h. p. 26-footer priced $3750 with a speed of 37 miles per hour.

Possibly the most popular and famous of all the Chris-Craft runabouts are the 26-foot models carrying 11 passengers. In these beautiful craft—Models 108 and 111—countless world's records have been set, for these Regatta motorboats, built to win in the face of the competition. They are staunch sea boats, too, and braved many a gale that kept larger craft in shelter. They are Pleasure's flagship on the waterways—the unquestioned leaders of motorboating. Priced from $4350 to $4750 powered with 200 h. p. motor or Chris-Craft's own V-type, 8-cylinder 250 h. p. motor. Speeds 42 to miles per hour, depending upon model and motor.

Those wishing exclusive custom built Chris-Craft runabouts may secure a 28-foot all-mahogany craft, Model 114, with 200 h. p. motor and 40 mile speed at $4875. Model 117 with Chris-Craft 250 h. p. motor travels 42 mile speed and is listed at $5275. Model 120 is an exclusive, custom-built 30-foot runabout with 250 h. p. Chris-Craft motor and a speed of 40 miles per hour; price, $7000.

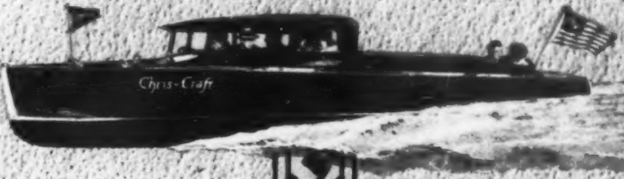


SMARTNESS WITH COMFORT

HERE is travel of the highest order never before approached by any boat builder. Here is Chris-Craft seaworthiness and unfailing dependability. Here is soft luxury, protection from sun, rain or sleet—a craft that asks only open water and takes no heed of the season. This 11 passenger sedan is driven with equal ease by man or woman, boy or girl. It minds its owner as though it anticipated the driver's mood. Whatever you need, whatever you ask of it, your wishes are exceeded. 26 feet in length, it may be had as Model 107 with 36 mile speed, at $4600. Model 109 in 40 mile speed is $5200, and Model 112, with 43 mile speed is priced at $5600.

Chris-Craft meets the universal demand for enclosed transportation with the most beautiful and completely appointed line of sedan-model motor boats ever launched. Latest addition is this Model 113, 26 foot convertible sedan, offering both runabout or closed boat advantages. Given a clear day, all of the runabout's airy coolness and freedom is instantly available; let clouds gather, and your same Chris-Craft becomes a yacht in miniature—snug, dry and warm. For 11 passengers, at 43 m. p. h. with a 250 h. p. Chris-Craft motor, and priced at $5700—where else in motorboating could you find such a craft? This sedan may be had with a 200 h. p. motor, 26 foot length. Model 110, 40-miles-an-hour speed, at $5300. Model 115 is a 28 foot craft with 200 h. p. motor giving 38 miles per hour, priced at $6850. The same craft as Model 118, with the famous Chris-Craft 250 h. p. motor, gives a speed of 40 m. p. h. and is priced at $6250.

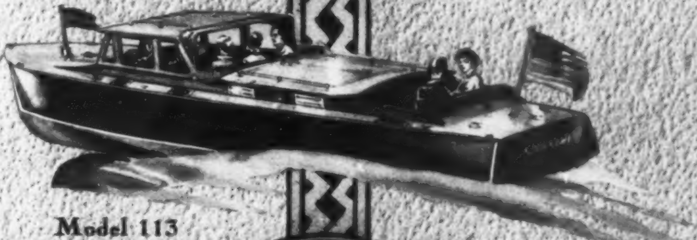
To those who want complete protection in the more open waterways at all times, Chris-Craft offers a delightfully complete and magnificently fitted 28-foot all-mahogany custom sedan, the Model 116. This dry, handsome speedster could fittingly be called the limousine of the waters, for its interior offers the utmost comfort and privacy under all conditions. Windows may be raised and lowered at the turn of a hand, giving unobstructed view with perfect shelter. Retaining the unmatched flexibility of performance that has made the name Chris-Craft the symbol of motorboating perfection, this craft will give you 38 m. p. h. It is powered with a 200 h. p. motor and easily accommodates eleven persons. It is priced at $6100. Model 119 carries the 250 h. p. Chris-Craft motor, gives a speed of 40 m. p. h. and sells at $6500.



Model 112

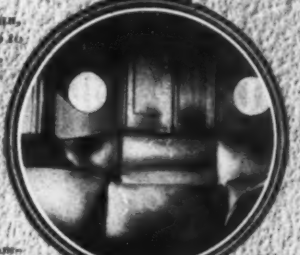
26' Deluxe Sedan, 11-passenger, speed up to 43 M. P. H. 250 H. P. Chris-Craft Marine Motor. $5600.00

Chris-Craft Sedans compare favorably with the costly limousine



Model 113

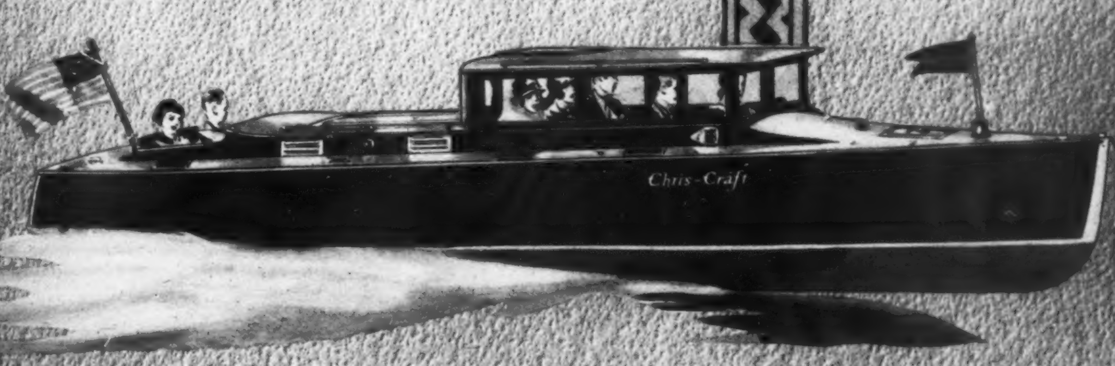
26' Convertible Sedan, 11-passenger, speed up to 43 M. P. H. 250 H. P. Chris-Craft Marine Motor . . $5700.00



Luxurious comfort with privacy

Model 119

28' all-mahogany Custom Sedan, 11-passenger, speed up to 40 M. P. H. 250 H. P. Chris-Craft Marine Motor $6500.00



THE GREATEST FLEET IN BOATING HISTORY

24 CHRIS-CRAFT

ALL-MAHOGANY MODELS

FOR 1930

Condensed Specifications and Prices F. O. B. Algonac, Michigan

Model Number		
100	—20' Runabout, 8 passenger, speed up to 31 M.P.H., 75 H.P.	Price $ 1895
101	—22' Runabout, 9 passenger, speed up to 50 M.P.H., 75 H.P.	Price $ 2195
102	—22' Runabout, 9 passenger, speed up to 36 M.P.H., 125 H.P.	Price $ 2596
103	—24' Runabout, 10 passenger, speed up to 35 M.P.H., 125 H.P.	Price $ 2850
105	—26' Runabout, 11 passenger, speed up to 32 M.P.H., 125 H.P.	Price $ 3200
106	—26' Runabout, 11 passenger, speed up to 37 M.P.H., 155 H.P.	Price $ 3750
108	—26' Runabout, 11 passenger, speed up to 42 M.P.H., 200 H.P.	Price $ 4350
111	—26' Runabout, 11 passenger, speed up to 45 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 4750
114	—28' Custom Runabout, 11 passenger, speed up to 40 M.P.H., 200 H.P.	Price $ 4875
117	—28' Custom Runabout, 11 passenger, speed up to 42 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 5276
120	—30' Custom Runabout, 12 passenger, speed up to 40 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 7000
104	—24' Sedan, 10 passenger, speed up to 34 M.P.H., 125 H.P.	Price $ 3400
107	—26' De Luxe Sedan, 11 passenger, speed up to 36 M.P.H., 155 H.P.	Price $ 4600
109	—26' De Luxe Sedan, 11 passenger, speed up to 40 M.P.H., 200 H.P.	Price $ 5200
110	—26' Convertible Sedan, 11 passenger, speed up to 40 M.P.H., 200 H.P.	Price $ 5300
112	—26' De Luxe Sedan, 11 passenger, speed up to 45 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 5600
113	—26' Convertible Sedan, 11 passenger, speed up to 43 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 5700
115	—28' Convertible Sedan, 11 passenger, speed up to 38 M.P.H., 200 H.P.	Price $ 5850
116	—28' Custom Sedan, 11 passenger, speed up to 38 M.P.H., 200 H.P.	Price $ 6100
118	—28' Convertible Sedan, 11 passenger, speed up to 40 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 6250
119	—28' Custom Sedan, 11 passenger, speed up to 40 M.P.H., 250 H.P. Chris-Craft Motor	Price $ 6500
121	—34' Custom Commuter, 14 passenger, speed up to 40 M.P.H., Two-200 H.P. Motors	Price $15000
122	—38' Commuting Cruiser, 20 passenger, speed up to 30 M.P.H., 250 H.P. Chris-Craft Motor	Price $15000
123	—48' Yacht, 30 passenger, speed up to 30 M.P.H., Two-250 H.P. Chris-Craft Motors	Price $35000

CHRIS SMITH & SONS BOAT CO., ALGONAC, MICHIGAN

Chris-Craft

World's Largest Builders of
All-Mahogany Motor Boats

Printed in U.S.A.

Commercial Credit Plans

Many of the leading boat manufacturers have selected Commercial Credit Plans for the financing of their products. The well-known boats—

- CHRIS CRAFT
- DART
- DEE WITE
- GAR WOOD
- JOHNSON
- LUDINGTON
- MULLINS

The well-known motors—

- ELTO
- EVINRUDE
- JOHNSON
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can be bought from income on special Commercial Credit Plans through boat dealers everywhere.

Buy Your Boat From Income

JUST as you would buy your new automobile you can now buy your boat from income—a moderate down payment, convenient payments monthly. Buy your boat now—from income—and assure yourself prompt delivery in the spring.

COMMERCIAL CREDIT COMPANIES

COMMERCIAL BANKERS

CASH CAPITAL and SURPLUS $57,000,000

COMMERCIAL CREDIT COMPANY - - Baltimore
COMMERCIAL CREDIT CORPORATION - New York
COMMERCIAL CREDIT TRUST - - - - - Chicago
COMMERCIAL ACCEPTANCE CO. - - Indianapolis

COMMERCIAL CREDIT COMPANY, Inc., New Orleans
COMMERCIAL CREDIT COMPANY - San Francisco
KEMSLEY, MILLBOURN & CO., Ltd. - New York
AMERICAN CREDIT CORPORATION - - - Omaha

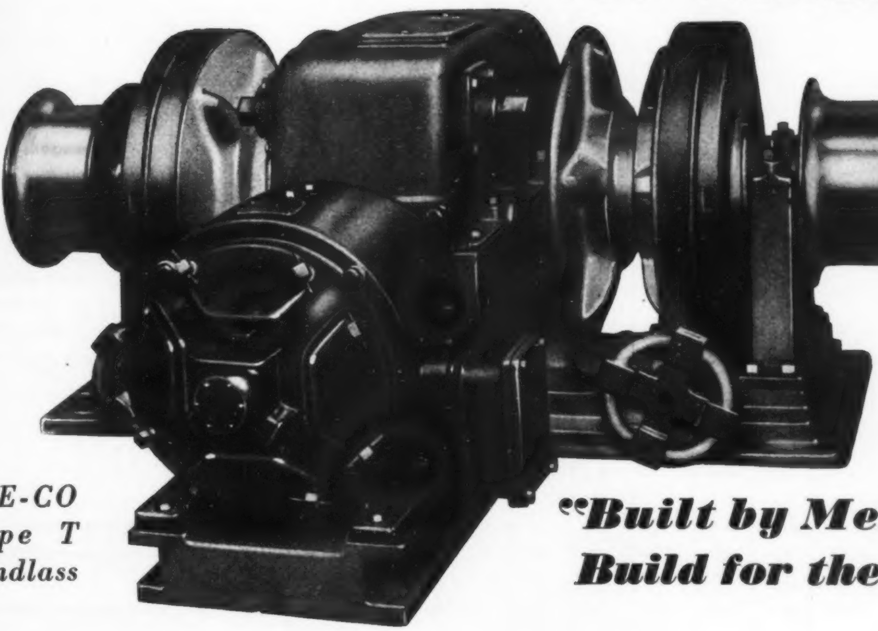
MIDWEST COMMERCIAL CREDIT COMPANY, Detroit, Des Moines, Milwaukee, Sioux Falls
CONTINENTAL GUARANTY CORP. *of* CANADA, Ltd., Montreal

NATIONAL HEADQUARTERS, Baltimore

Wherever you are ~ Whatever you make, sell, or buy ~ Investigate Commercial Credit Service

Announcing
On the U.S.S. Salt Lake City
A-E-CO Windlasses and
other A-E-CO Auxiliaries
AMERICAN

a new
A-E-CO Windlass
for Yachts



*A-E-CO
Type T
Windlass*

"Built by Men Who Build for the Navy"

See it at the Show—

Note how compact this new windlass is . . . two wildcats and two gypsey heads, with not an inch of space wasted.

By means of locking heads, the two wildcats can be operated separately or simultaneously, as desired . . . a hand brake is provided for each wildcat . . . removable levers permit of hand operation.

Observe what a well-designed machine this is . . . how rugged . . . worm and spur gearing run in a bath of oil inside an oil-tight casing . . . note the accessibility of the motor . . . the conveniently located inspection covers.

With this windlass at the Motor Boat Show will be a full line of other windlasses, winches, hoists, steerers and other yacht auxiliaries.

**American Engineering Company
2419 Aramingo Avenue, Philadelphia**

If you are unable to visit the Show, send for our 1930 catalog of Yacht Auxiliaries.

ENGINEERING

STANDARDIZED CRUISERS AND EXPRESS CRUISERS

PRICES—SIZES—EQUIPMENT

(*Continued from page 152*)

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
ELCO **Bayonne, N. J.**												
Twenty-Six	....	26-9	9-2	2-4	3-9	2-11	5-9	Round	Elco-Gray	45	11	abcdefghpqsuvwxyzFGHIJKLMQRSUWXY
Vedette	....	30-11	8-6	2-4	4-9	3-0	6-1	Vee	Elco-Buda	80	20	abcdefghpqsuvwxyzBCFGHIJKLMQRSU WXY
Cruisette	....	35-0	10-3	2-9	4-8	3-6	6-1	Round	Elco-Buda	125	16	abcdefghpquvwxyzBCFGHIJKLMQRSU WXY
Thirty-Eight	....	38-0	10-5	2-10	5-3	3-4	6-1	Round	Elco-F62	145	15	abcdefghpqsuvwxyzABCFGHIJKLMQRS UWXY
Forty-Two	....	42-9	11-11	3-0	6-0	3-9	6-2	Round	Elco-F62	145	13	abcdefghpqsuvwxyzBCEFGHIJKLMQRS TUVWXY
Fifty	....	50-4	12-9	3-0	6-8	4-0	6-3	Round	Elco-F62	145	15	abcdefghpqsuvwxyzBCEFGHIJKLMQRS TUVWXY
FAIRFORM FLYER **Jacksonville, Fla.**												
45 Cruiser	17500	45-0	11-0	2-8	6-6	4-0	6-6	Vee	2 Kermath	400	25	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOQRSTUVWXYZ
54 Cruiser	26000	54-0	11-4	2-8	6-6	4-0	6-6	Vee	2 Sterling	580	30	abcdefghijklmnopqrstuvwxyzABCDEFGHI JKLMNOQRSTUVWXYZ
FLEETWING **New York, N. Y.**												
Jr.	....	28-0	8-3	2-6	....	....	6-0	Round	....	75	14	abcdefghpqsuvwyzFGHIJKLMQUVXY
Sportster	....	28-0	8-3	2-6	....	....	6-0	Round	Fleetwing	175	28	abcdefghpqsuvwxyzBCFGHIJKLMQSUV WXY
42	....	42-0	11-6	3-6	....	....	6-2	Round	Fleetwing	175	18	abcdefghpqrsuvwxyzABCEFGHIJKLMQR STUVWXYZ
50	....	50-0	12-6	3-9	....	....	6-3	Round	2 Fleetwings	350	22	abcdefghqsuvwxyzBCEFGHIJKLMQRST UVWXYZ
56	....	56-0	10-1	2-8	....	....	6-3	Round	2 Libertys	800	38	abcdefghopqsuvwxyzBCEFGHIJKLMQRS TUVWXYZ
62	....	62-0	13-6	3-9	....	....	6-4	Round	2 Fleetwings	350	15	abcdefghpqrsuvwxyzABCEFGHIJKLMQR STUVWXY
75	....	75-0	15-0	3-10	....	....	6-4	Round	Diesels	600	20	abcdefghpqrsuvwxyzABCEFGHIJKLM QRSTUVWXYZ
GRANDY **Seattle, Wash.**												
28	2885	28-0	8-6	....	....	....	....	Round	Gray	60	8	
30	4000	30-0	9-4	....	....	....	....	Round	Gray	72	11	
36	4950	36-0	9-9	....	....	....	....	Round	Gray	90	13	
40	8450	40-0	10-6	....	....	....	....	Round	Hall-Scott	100	16	
GREENPORT **Greenport, N. Y.**												
40 De Luxe	12950	40-0	10-6	3-6	5-6	3-2	6-2	Round	Buda	115	12	abcdefghijpqsuvwxyzBCFGHIJKLMQRST UVWXY
40 Standard	10875	40-0	10-6	3-6	5-6	3-3	6-2	Round	Buda	115	12	abcdefghipqsuvwxyzBFGHIJKLMQRSTU VWXY
HACKER CRAFT **Mount Clemens, Mich.**												
38 Commuter	17000	38-0	8-5	2-3	3-6	2-6	6-0	Vee	2-Kermaths	400	42	abcdefghpqstuvwxyzABCDEFGHIJKLMQ SUVWXYZ
HUMPHREYS SEA CRUISER **New York, N. Y.**												
40 Pilot	14250	40-0	10-6	3-0	5-6	3-4	6-2	Round	Hill	48	12	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMQRSTUVWXYZ
45 Navigator	19450	45-0	11-0	3-0	5-8	3-6	6-2	Round	Hill	75	13	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMQRSTUVWXYZ
50 Challenger	28000	50-0	12-6	3-6	6-0	3-9	6-3	Round	Optional	100	14	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMQRSTUVWXYZ
55 Privateer	32000	55-0	12-6	3-6	6-0	4-0	6-3	Round	Optional	2-100	15	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMQRSTUVWXYZ
60 Explorer	46400	60-0	13-6	4-0	6-3	4-1	6-4	Round	Optional	2-100	14	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMNQRSTUVWXYZ
65 Destroyer	51150	65-0	13-6	4-0	6-8	4-3	6-4	Round	Optional	300	17	abcdefghijklmnopqstuvwxyzABCDEFGHIJ KLMNQRSTUVWXYZ
70 Discoverer	69600	70-0	14-6	4-6	7-0	4-6	6-5	Round	Optional	2-150	14	abcdefghiklmnopqstuvwxyzABCDEFGHIJ KLMNQRSTUVWXYZ
75 Commander	85500	75-0	15-0	4-6	7-3	5-0	6-6	Round	Optional	2-200	16	abcdefghiklmnopqstuvwxyzABCDEFGHIJ KLMNQRSTUVWXYZ
HOLL-CRAFT **Boston, Mass.**												
56 Steel Cruiser	37500	56-0	13-0	4-0	5-6	3-2	6-8	Vee	2-M.A.N. Diesel	70 ea.	16	abcdefghijklmnopqrsuvwxyzABCDEFGIJK LMNQRSTUVWXYZ
EDWARD FELL JARDINE **Atlantic City, N. J.**												
Flying Fish	6000	30-0	7-6	2-4	3-2	2-4	6-0	Skiff	Sterling	200	30	abcdefgstuvwxyzBCFGHIJKLQSVWXYZ
Jardine 35	11000	35-0	8-9	2-9	6-0	2-8	6-0	Skiff	Sterling	150	20	abcdefghijklmnopqrstuvwxyzABCDEFGH IJKLMQRSUVWXYZ
KING SEA SKIFF **Highlands, N. J.**												
R. D. Sportsman 28	3075	28-0	8-0	2-0	4-6	3-4	5-6	Sea Skiff	Scripps	100	20	abcefsuvwyzBJKLQSVXY
28 De Luxe	3850	28-0	8-0	2-0	4-6	3-4	5-10	Sea Skiff	Scripps	100	18	abcdefgopqsuvwxyzBFGHIJKLQSUVWXY
30 De Luxe	5250	30-0	8-6	2-0	4-10	3-8	6-0	Sea Skiff	Scripps	100	16	abcdefgopqsuvwxyzBFGHIJKLQSUVWXY
LIGGETT **Wyandotte, Mich.**												
35 Single Cabin Cruiser	6600	34-10	9-6	2-8	4-10	2-10	6-2	Round	Kerm.—Choice	200	23	abcdefghpqstvwyzBCFGHIJKLMQRSUV WXY
35 Double Cabin Cruiser	7200	34-10	9-6	2-8	4-10	2-10	6-2	Round	Kerm.—Choice	200	23	abcdefghpqstvwyzBCFGHIJKLMQRSTUV WXY
35 Sport Cruiser	7600	34-10	9-6	2-8	4-10	2-10	6-2	Round	Kerm.—Choice	200	23	abcdefghpqstvwyzBCFGHIJKLMQRSTUV WXY
35 Double Cabin, Open Bridge and Aft Windshield	8100	34-10	9-6	2-8	4-10	2-10	6-2	Round	Kerm.—Choice	200	23	abcdefghpqstvwyzBCFGHIJKLMQRSTUV WXY
35 Dble. Cab., Encl. Bridge	8400	34-10	9-6	2-8	4-10	2-10	6-2	Round	Kerm.—Choice	150	20	abcdefghpqstvwyzBCFGHIJKLMQRSTUV WXY
40 Double Cabin Cruiser	14100	40-0	10-8	3-0	5-9	3-0	6-2	Vee	Kerm.—Choice	200	21	abcdefghpqstvwxyzBCEFGHIJKLMQRST UVWXY
47 Double Cabin, Enclosed Deckhouse	17300	47-0	11-6	3-0	5-9	3-2	6-2	Round	Kerm.—Choice	200	18	abcdefghpqstvwxyzBCEFGHIJKLMQRST UVWXYZ

***See Page 00 for Key to Equipment Symbols**

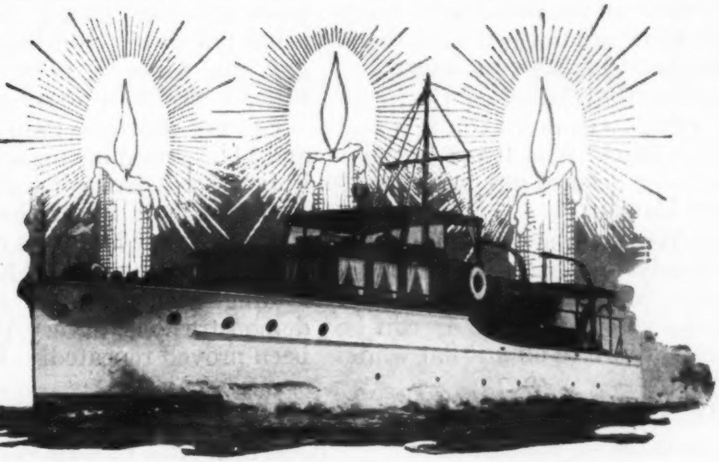
(*Continued on page 288*)

Two Ideal Yachts
for Discriminating Yachtsmen

FLEETWING 50

A luxurious wonder craft with cruising accommodations for eight and crew of two, and speed of 22 to 25 miles per hour. Twin Fleetwing engines. Optional interior decorations.

Birthday Gifts Worth While



FLEETWING 55

A rakish craft with three separate staterooms and crew's quarters for three or four. Twin Fleetwing, Buda or optional power. Several selections of interior decorating schemes.

FLEETWING YACHT & SHIPBUILDING CORP.
153rd STREET AND HUDSON RIVER NEW YORK CITY

You are cordially invited to visit our showroom—via Subway to 157th Street, then across bridge foot of 155th Street—via auto to 158th Street and under viaduct, then back to 153rd Street

CLIMAX
BOAT
PAINTS

Talk About Sea-Going Paints

HERE is a group of marine paint products that are the sensation of the industry. One after another, the most prominent and progressive boat builders have adopted CLIMAX Boat Paints, and many of the best known boats at the New York Show are finished with them. These include the finest blacks ever shown.

Everybody knows that black is the ultra smart finish for 1930. CLIMAX BLACK is a real black. And it stays black. Also it is real paint with a water resistance deemed impossible heretofore in a marine black.

CLIMAX YACHT WHITE is a sea-going white. It covers marvelously and is free from brush marks. This white will never yellow and it doesn't turn chalky, crack or peel. It can be toned from full gloss down to almost flat white.

CLIMAKOTE is an absolute flat coat used as an undercoater. Many builders are applying three coats in a working day, and sanding only the final coat. It saves time in finishing, yet gives a better, longer lasting finish than any other flat coater you have ever used. Made in gray and white for wood or metal, exterior and interior, under or above water.

CLIMAX Bottom Paints, red, brown, green and black, combine highest anti-fouling quality in both fresh and salt water, with a good, hard, low resistance finish that stands the gaff of speed boat use and does not become porous.

CLIMAX Boat Paints have been adopted by leading builders after conclusive tests and demonstrations. Every claim they make has been proved repeatedly. Investigate.

THE CLIMAX CLEANER MFG. CO., CLEVELAND, OHIO

***New England Office:* 282 Moody St., Waltham, Mass.** ***Pacific Coast Office:* 135 South Swall Drive, Los Angeles, Cal**

CLIMAX
BOAT PAINTS

Now Ready
for the
1930 season

A PRINCELY NEW CRUISER

Mahogany finished
Two double cabins
Double planked
Two 180 horse power each,
Speedway engines

Large bridge deck
After cockpit
One man control
Accommodations for one
or two in crew

20 miles cruising speed

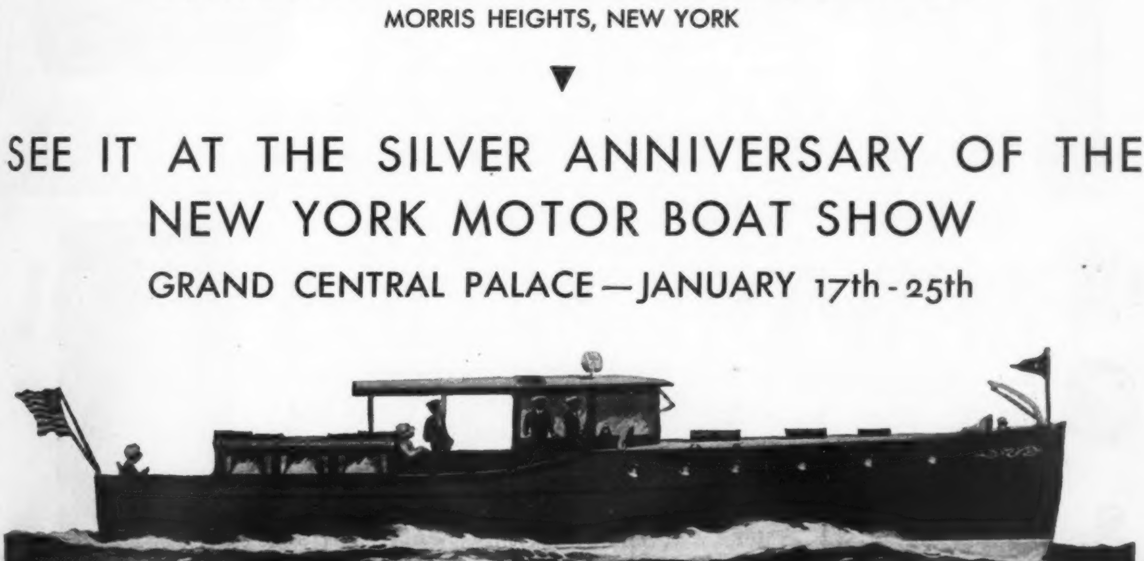
Forty-five years experience in Marine designing and engineering insures faultless Construction, Completeness in equipment and distinctive in finish.

CONSOLIDATED SHIPBUILDING CORPORATION
MORRIS HEIGHTS, NEW YORK

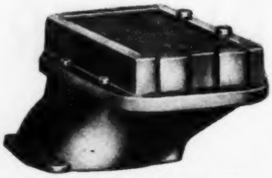
▼

SEE IT AT THE SILVER ANNIVERSARY OF THE
NEW YORK MOTOR BOAT SHOW

GRAND CENTRAL PALACE—JANUARY 17th-25th



PROTECTOSEAL
PRODUCTS
Fire Protection for Marine Engines and Tanks
Safety Devices for Hazardous Liquids



*Off-set adaptor with Back Fire Trap attached. This adaptor about three inches long—clears interference from manifold or cylinders of engine. One of many types of installation to show **flexibility of structure.***

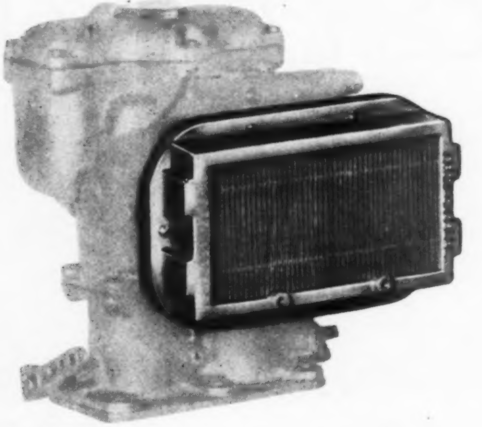
Cylindrical Type Back Fire Trap for carburetors with round intakes. Volume of air required for proper mixture determines number of baffle plates. Over-all size for 200 H.P. engine need not exceed three inches by five inches for perfect operation.

The combination Protectoseal head and deck flange fuel inlet shown, eliminates need of additional deck plate and provides a combination fill and vent, pressure relief, vacuum breaker, seal and protected opening for filling and rodding. Eliminates possibility of interior ignition or explosion.

Overflow vent for attaching to boat hull. Opening protected by fire screen.

Hood cover for gas-tank vent. Prevents water from entering fuel. Adds to beauty of boat's deck fittings.

Thimble vent screen. Prevents fire flash through vent line.



Straight type Back Fire Trap, brings plate baffle away from intake allowing unobstructed movement of butterfly valve in carburetor.

PROTECTOSEAL MARINE FIRE PREVENTION DEVICES have been tested and proven efficient under the most severe conditions. *Listed by Underwriters' Laboratories as standard.* Adopted by leading boat and engine manufacturers as essential to superiority and excellence in motor boat operation. Standard with *Chris Smith & Sons Boat Company, Scripps Motor Company, Dwight Lumber Company, Corsair Boat Company, North Star Marine Construction Company, Hacker Boat Company, etc., etc.*

Protectoseal Back Fire Traps and adaptors are made of special salt-resisting aluminum. They are indestructible and cannot get out of alignment. Suitable to any type carburetor. Fitted without engine structural changes. Will positively trap any volume of flame. *Provides amples air-flow any size engine without loss of R.P.M. or power.*

There is a complete line of Protectoseal Fire Prevention products for practically all marine requirements.

Write us for the name of our dealer in your territory or visit our Eastern Show Room for actual demonstrations when in New York for the Motor Boat Show.

Literature on request

New York Distributors:

FINK-DUMONT-WHITE, INC.

270 Lafayette Street

Michigan Distributors:

AMERICAN SAFETY EQUIPMENT CO.

4619 Woodward Avenue, Detroit

*Back Fire Trap plate baffle for direct connection to carburetor intake. Requires minimum of space **being only 1¼" in thickness.***

Carburetor drip can. Prevents carburetor overflow from falling into bilge, thus eliminating an otherwise active hazard. Copper tube equipped with standard coupling for connection to manifold intake which draws up liquid in drip by vacuum preventing overflow. Check valve in tube prevents backfire into can. Screen opening eliminates ignition of can.

Fuel tanks, made in various sizes to order, of heavy gauge terne plate, with pure Armco Iron base terne plate. Double seamed and soldered to prevent leakage and opening of seams in case of adjacent fire. The tank shown above is equipped with a Protectoseal cap.

Special made to order fuel tank with elongated filling flange. Flange supplied in any required length.

PROTECTOSEAL COMPANY—Factory & General Offices—Chicago, Ill.

District Offices: Boston, Rochester, Philadelphia, Indianapolis
Representatives: M. F. Murdock Co., Akron, Ohio; W. P. & R. S. Mars, Duluth, Minn.; Calvin Supply Co., Los Angeles, Cal.

ACO
SEABOATS

Announced by

THE ÆOLIAN COMPANY
NEW YORK - LONDON - PARIS - BERLIN - MADRID
MELBOURNE & SYDNEY

an International Institution

SEA ACO BOATS

By Appointment
H. M. King George

Announcing
THREE NEW RUNABOUTS
by
THE AEOLIAN COMPANY

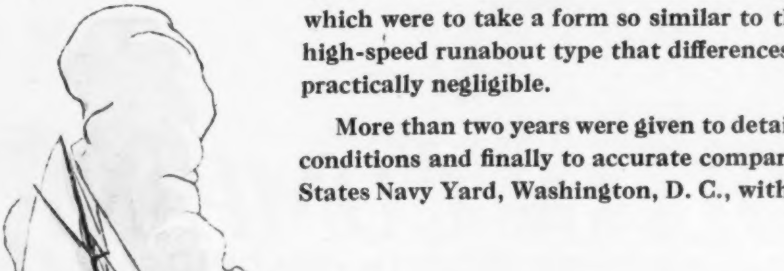
THE Aeolian Company announces its entry in the boating field. In 1930 it offers ACO Seaboats in 16, 20 and 26-foot models. ACO Seaboats possess comfort, safety, passenger carrying capacity and seaworthiness to a degree heretofore unknown.

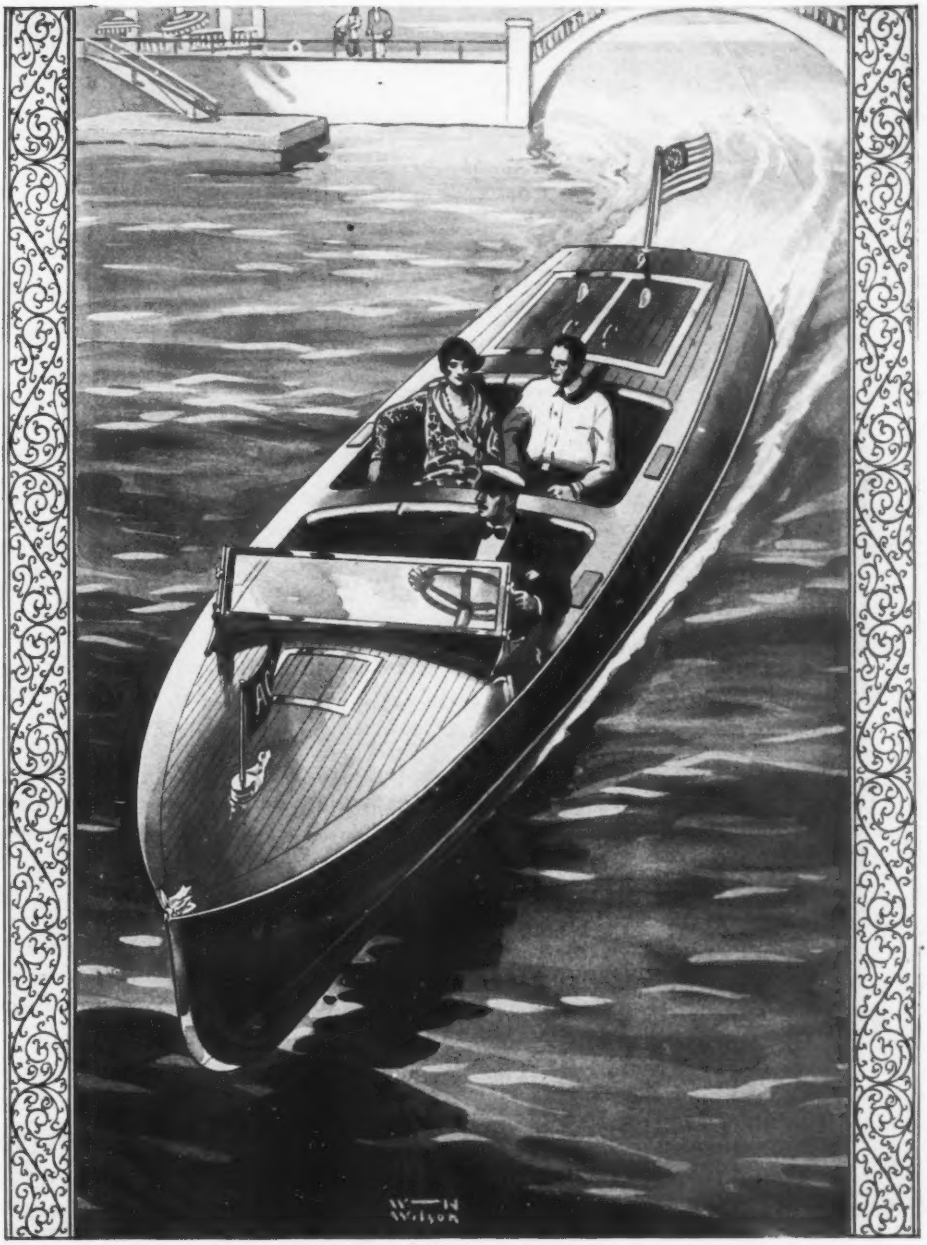
FASTER ⋆ DRIER ⋆ SAFER

The boating world is manifesting much interest in the new craft designed by George Crouch, former dean of Webb Institute of Naval Architecture, New York, and the outstanding designer of high speed craft in America; together with Fred W. Goeller, Jr., late of Lawley's, Neponset, Mass., designer and builder of successful high-speed cruisers.

Leaders in the development of speed types, Messrs. Crouch and Goeller approached the problem of design from different angles. George Crouch had invented the concave-vee model 20 years ago, and five years later began experiments with a new form of hull which now culminates in ACO Seaboats. Fred Goeller at the same time began to develop high-speed cruisers which were to take a form so similar to the models of Mr. Crouch for the high-speed runabout type that differences between the two creations were practically negligible.

More than two years were given to detailed design, to tests under service conditions and finally to accurate comparisons in the tank of the United States Navy Yard, Washington, D. C., with models representing every type.





By Appointment
H. M. King Albert

SCIENTIFIC WEIGHT DISTRIBUTION

In these new runabouts the weights of hull, engine, fuel and passengers have been located so that maximum performance and comfort are obtained not only at high speed, but also at lower speeds with full load. They are safe, comfortable boats, free from slap and shock even at high speed, possessing a maximum speed for the power installed. In ACO Seaboats the spray breaks far aft and lifts only a few inches above the water level, insuring dryness.

By Appointment
His Holiness Pope Pius XI

ACO SEABOATS

The design of these runabouts is sane and sound naval engineering, without freak novelties of doubtful use and purpose which are often included to attract notice.

The shortcomings of average runabouts were realized by the designers, their lack of sea-going ability, extreme discomfort in rough water and their habit of showering passengers with spray.

Economy of operation and upkeep have been considered equally with speed, comfort and easy handling in any weather.

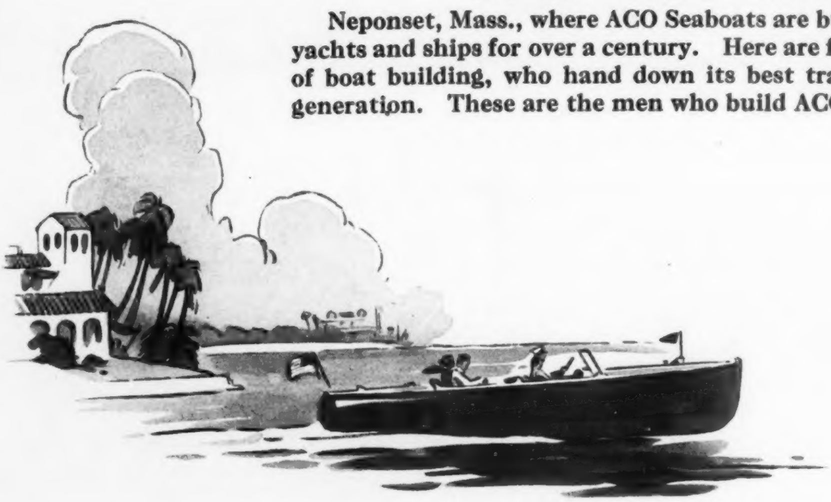
STRONGER

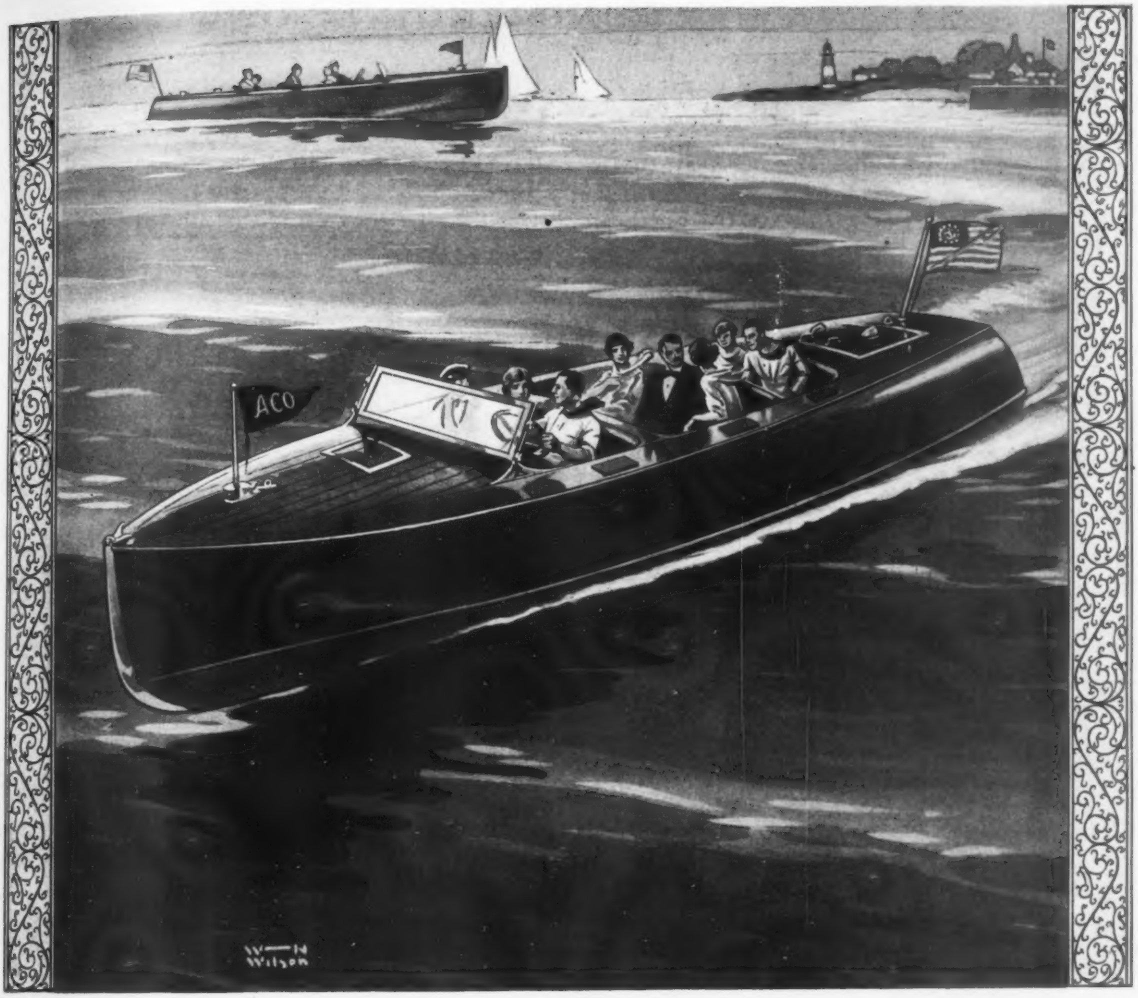
ACO Seaboats are stronger since their design is free from corners and angles, and the method of construction is the result of years of boat building experience. The Aeolian Company adopted the type of construction used in ACO Seaboats after exhaustive tests had been made with the methods used by other builders.

Design, material and expert craftsmanship are combined to produce a strong and stout hull able to meet the stress of wind and water. Simplicity of construction and rugged strength insure many years of trouble-free service. ACO Seaboats are "sea-tested" and subjected to tide, wind and weather before shipment.

THE WORLD'S FINEST CRAFTSMEN BUILD ACO SEABOATS

Neponset, Mass., where ACO Seaboats are built, has been famous for its yachts and ships for over a century. Here are found the master craftsmen of boat building, who hand down its best traditions from generation to generation. These are the men who build ACO Seaboats.





New Seating in

COMMODIOUS SPACE FOR PASSENGERS

The Aeolian Company made exhaustive tests with the motor placed amidships and with the motor located aft, near the stern. With the motor aft, advantages are gained in speed, dryness, comfort and safety over the conventional arrangement. This arrangement is so superior that it is adopted for all ACO Seaboat models.

This disposition of the motor allows of a social grouping of passengers in a single cockpit. Whether the boat is carrying two passengers or its full load capacity, there is no change in trim, for the additional load is carried amidships, causing the hull to settle bodily rather than to drop down at either bow or stern.

By Appointment
H. R. H. Prince of Wales

SANE AND SOUND ENGINEERING

The motor is placed under a double hatch in the after deck. Forward of the motor is an oil tight, water cooled gear case containing case hardened, nickel steel gears running on ball bearings. The gear teeth are helically cut to insure quiet operation and oil is fed by pressure to the meshing point of the gears. The lower gear in the case drives the propeller shaft at a speed which gives the maximum propeller efficiency while the motor speed is that at which it develops its greatest horse power.

SAFETY AND SERVICE

ACO Seaboats are free from the disagreeable jolting shocks and hard bumps which are suffered by passengers in the usual types of high-speed boats. This new comfort is due to the novel design of the hull which presents no flat surfaces against which waves might strike with heavy impact.

Combined with this smooth and fast travel is freedom from spray. It is this dryness which surprises the most experienced motor boat enthusiast.

ACO Seaboats are sane and conservative in design, construction and details, are handsome and well appointed and set a new standard of performance.

TESTED IN SALT WATER

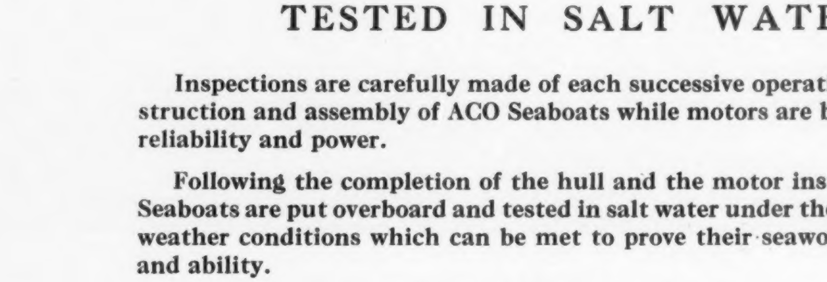
Inspections are carefully made of each successive operation in the construction and assembly of ACO Seaboats while motors are block tested for reliability and power.

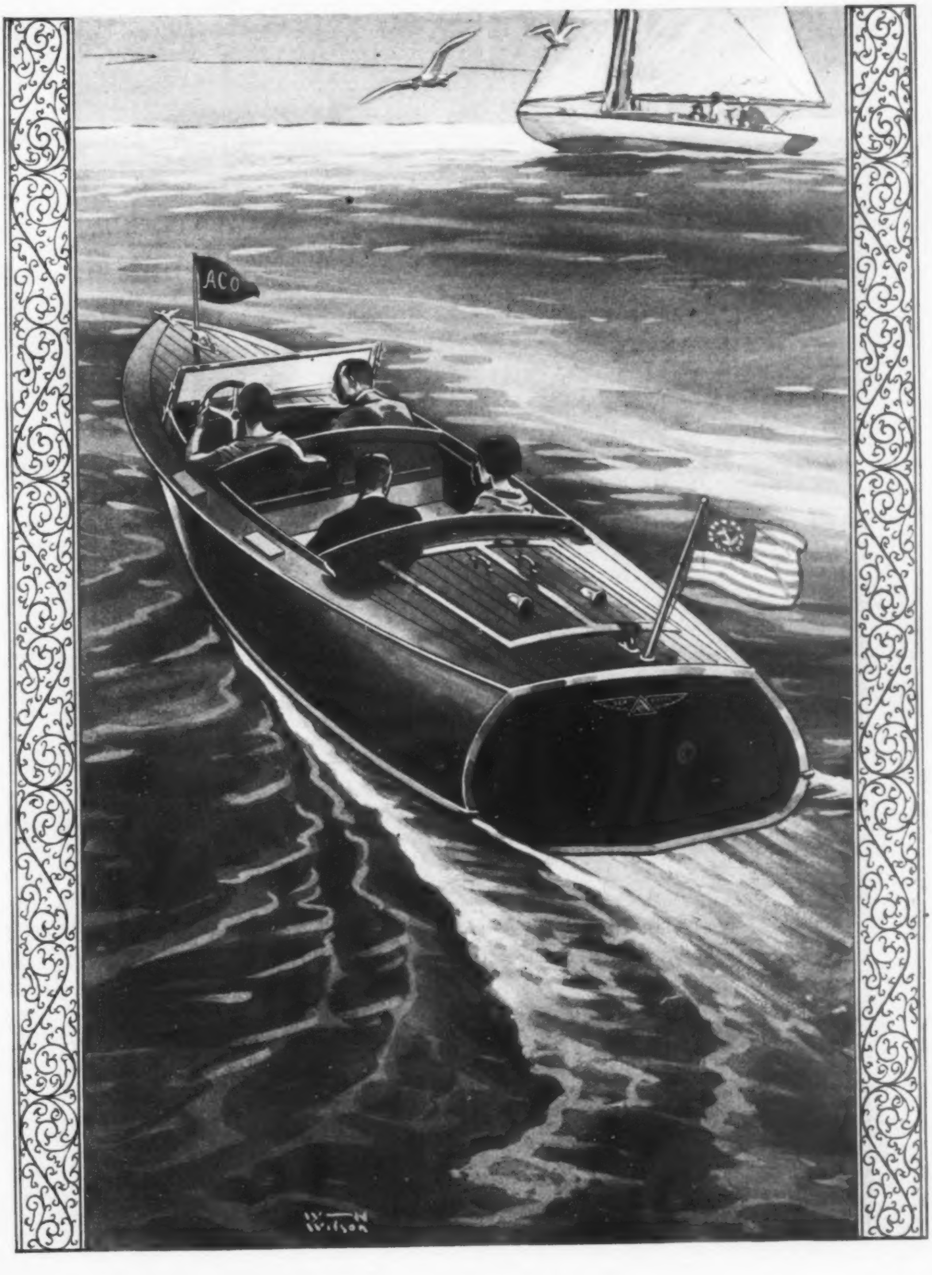
Following the completion of the hull and the motor installation, ACO Seaboats are put overboard and tested in salt water under the most difficult weather conditions which can be met to prove their seaworthiness, speed and ability.

ACO Seaboats are then refinished and the equipment put aboard before shipping. Delivery is made from waterside or directly to freight cars from the company's spur tracks, serving the works.

Every effort is made by the builders to insure the fine performance of ACO Seaboats and to merit the buyer's continuing satisfaction and pride of ownership.

By Appointment
H. M. King Alfonso XIII

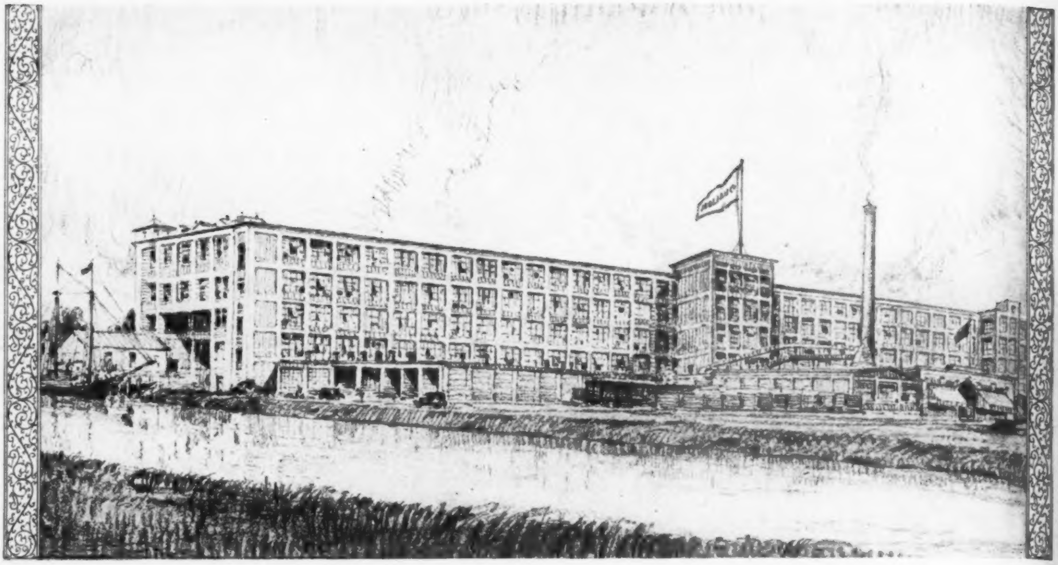




By Appointment
H.R.H. Crown Prince Gustaf
Adolph

THE AEOLIAN COMPANY'S RESOURCES

The Aeolian Company, a world-wide institution with unlimited resources and factories in England, America, France, Germany and Australia, brings to the construction of high-speed motor boats the same painstaking care as they give to the manufacture of their other internationally known products.



AEOLIAN WORKS, NEPONSET, MASS. WHERE ACO SEABOATS ARE CONSTRUCTED

Above is pictured The Aeolian Company's great works at Neponset, Mass., (a suburb of Boston) on the Neponset River, the most modern and completely equipped woodworking plant in America.

Millions of running feet of oak, walnut, mahogany and other woods are piled up to season under cover.

Every modern appliance of manufacture is provided for the hundreds of veteran craftsmen who build ACO Seaboats.

SPECIFICATIONS

Model	Length	Beam	Draft	Freeboard		Size of Planking	Frame Size and Spacing	Keel Size	Power Plant	H.P. and Rev.	Engine Weight	Shafting	Fuel Cap. Gals.	Boat Speed M.P.H.
				Forward	Aft									
16-37	15' 11½"	5' 3½"	1' 9½"	2' 2"	1' 5¾"	11/32"	⅝"x⅝"—6"	2"x4"	Gray	37@2900	390 lbs.	¾" Everdur	16	25
16-41	15' 11½"	5' 3½"	1' 9½"	2' 2"	1' 5¾"	11/32"	⅝"x⅝"—6"	2"x4"	Gray	41@3000	400 lbs.	¾" Everdur	16	25
20-72	20' 0"	6' 1"	2' 1"	2' 8"	1' 10"	7/16"	11/16"x11/16"—6"	2"x4½"	Gray	72@3000	570 lbs.	1" Everdur	32	30
20-120	20' 0"	6' 1"	2' 1"	2' 8"	1' 10"	7/16"	11/16"x11/16"—6"	2"x4½"	Gray	120@3000	830 lbs.	1⅛" Everdur	32	40
26-120	25' 8"	6' 7¼"	2' 4"	2' 10"	1' 11½"	½"	¾"x¾"—6"	2"x5"	Gray	120@3000	830 lbs.	1⅛" Everdur	64	31
26 Sedan	25' 8"	6' 7¼"	2' 4"	2' 10"	1' 11½"	½"	¾"x¾"—6"	2"x5"	Gray	120@3000	830 lbs.	1⅛" Everdur	64	30

ACO Seaboats are smooth planked and round bottomed—Planking, Trim, Keel of Mahogany—Bronze rudder and fastenings.

STANDARD EQUIPMENT

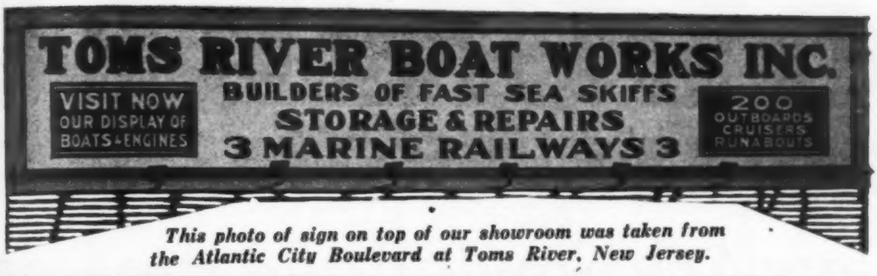
Anchor
Anchor Lines
Dock Lines
Fenders
Cushions
Life Preservers
Bailers
Whistle
Fire Extinguisher
Running Lights
Upholstery Inside
(†) Electric Lights
Storage Battery
(‡) Tachometer
(*) Motometer
Windshield
Locker Space
Fog Horn
Pilot Rules
(§) Boat Hook
Tools
Floor Covering

(†) On models 20-72 and 20-120 and 26-Sedan
(‡) On models 20-72 and 20-120
(*) On models 20-72 and 20-120
(§) On models 20-72 and 20-120 and 26-120 and 26-Sedan

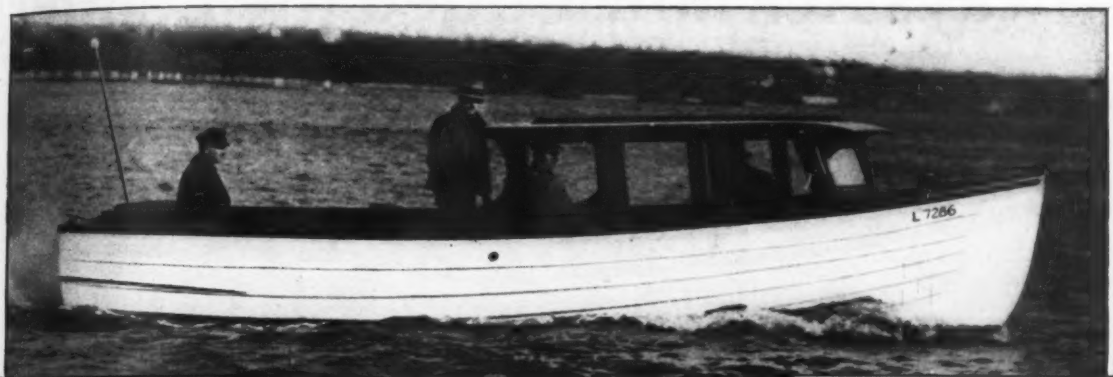
WRITE TODAY

Now, while the impulse to do so is strong with you, write today for prices, specifications, delivery dates and any required information, to

THE ÆOLIAN COMPANY
AEOLIAN HALL
5TH AVENUE AT 54TH STREET
NEW YORK CITY



This photo of sign on top of our showroom was taken from the Atlantic City Boulevard at Toms River, New Jersey.



Announcing

The VIKING

Sport Fisherman

24-, 26- and 30-Foot Models

AN all around practical sea-boat of staunch construction and fine quality designed for fishing or day cruising. Seats ten in cabin and has dual steering controls, from forward and cockpit positions. The cockpit is spacious and unobstructed for casting.

SPECIFICATIONS *and* EQUIPMENT

RIBS: 1" x 1⅛" White Oak
PLANKING: ¾" Cedar
KEEL: 4" Yellow Pine
STEM: Oak
TRANSOM: Mahogany
Copper Fastened
Sedan Cabin, Cockpit Seats with Lazy Backs, Inside Sheathing, all Solid Mahogany

Finished in five coats of Spar varnish
HULL: Finished in four coats of white
50-H.P. 6-Cylinder Motor
Sands Toilet
Navy Bilge Pump
Pyrene Fire Extinguisher
Life Preservers
Kapoc Cushions

Electric Running Lights
60-Gal. Gas Tank
Two Steering Wheels
Columbian Bronze Propeller Rudder and Strut
Anchor and Rope
All Hardware of the Best
Absolutely fully equipped
SPEED: 14 M.P.H. and up

The Vikings are available in several cabin styles

$2250.00 and up

Afloat Toms River, N. J.

YOUR BEST BET—Visit our showroom on Toms River (adjacent to Atlantic City Boulevard) and inspect the latest models.

ACO SEABOATS

BOYD-MARTIN *and* DEE-WITE RUNABOUTS
RICHARDSON 29-FT. *and* STAPLES-JOHNSON 34-FT. CRUISERS

Demonstrations Given at our Showroom on the Waterfront—the Place to Buy Your Boat!

TOMS RIVER BOAT WORKS, Inc.

Forty Years a Boat Yard

CHARLES THOMPSON, *Manager* Telephone: 180

TOMS RIVER, NEW JERSEY

BUILDERS OF *FAST SEA SKIFFS* AND YACHT TENDERS

COLUMBIAN
BRONZE PROPELLERS
Always Acknowledged the Leader!

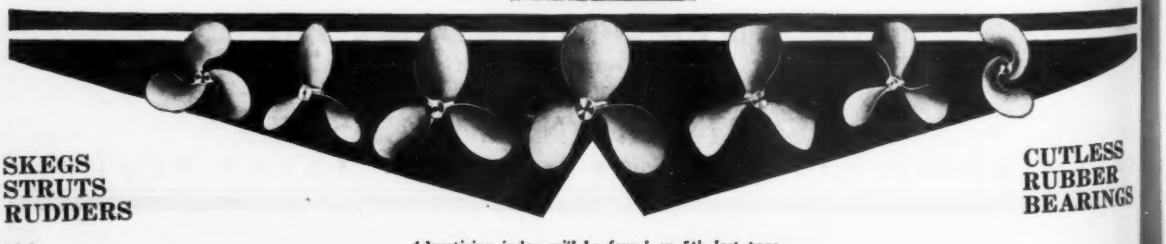
Exhibiting New York Motor Boat Show, Booths 105 and 106, Third Floor.

□ □ □

Send for Catalog "Propellers in a Nut Shell"

COLUMBIAN BRONZE CORP.
208 No. Main St., Freeport, L. I., N. Y.
Representatives: Detroit, Henry H. Smith & Co.; San Francisco: H. A. B. Sneve Co.

CAP'N ALLSWELL Says:
"The craft with a Columbian behind usually arrives before!"



SKEGS
STRUTS
RUDDERS

CUTLESS
RUBBER
BEARINGS

COLUMBIAN BRONZE

Marine Hardware

"Once + for all!"

Columbian boat fittings are cast from toughest manganese bronze . . . the same composition that goes into all Columbian Propellers. They may cost a trifle more at the start, but they will *never need replacing!*

Fig. 400—Cruiser Rudder

No.	Size	Price
401	16 x 16	$16.00
402	18 x 16	17.00
403	18 x 18	19.00
404	20 x 18	21.00
405	20 x 20	24.00
406	22 x 18	24.00
407	22 x 20	32.00
408	22 x 22	35.00
409	24 x 20	33.00
410	24 x 22	33.50
411	24 x 24	34.50
412	24 x 26	50.00
413	26 x 26	50.00

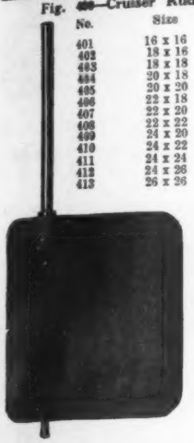


Fig. 400

Fig. 600—Cruiser Rudder

No.	Size		Price
601	9¼	12¼	$8.00
602	12⅜	15	12.50
603	13	16	14.50
604	13⅝	17	15.90
605	14⅜	18	18.25
606	14½	19	19.00
607	16¼	20	22.00
608	17½	21	25.25
609	17⅝	22	27.25
610	19	23	36.50
611	19½	24	39.00
612	20¼	25	42.25
613	22⅜	26	48.75
614	22	27	49.50
615	25	30	62.50
616	28	34	79.25

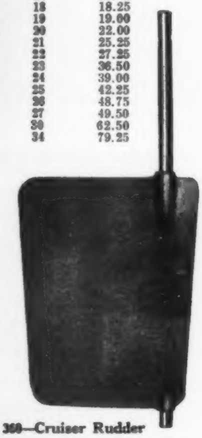


Fig. 600

Fig. 360—Cruiser Rudder

No.	Size		Price
361	12	9	$10.25
362	14	10½	12.80
363	16	12	14.50
364	18	13½	20.25
365	20	15	28.00
366	22	16½	41.00
367	24	18	56.00
368	26	20	70.00

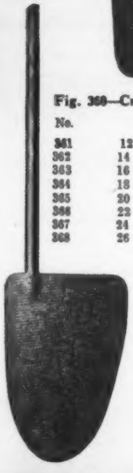


Fig. 360

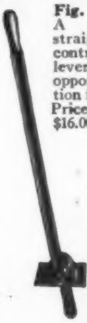


Fig. 457 (Left) A compact straight lever control; lower lever moves in opposite direction from handle. Price complete $16.00.

Fig. 458 (Right) This control needs no counter shafts; lower lever moves in same direction as handle. No water comes through the cockpit floor. Price complete $27.00.

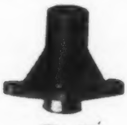


Fig. 170
Stern Bearing

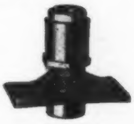


Fig. 155
Heavy Square Flange Stuffing Box

Fig. 160
Plain Stuffing Box

Reverse Control Outfit

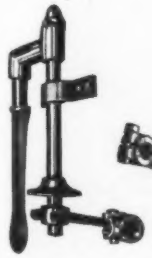


Fig. 450

This outfit consists of handle, choice of floor plates or brackets, two levers and rod ends. Price complete $20. Sold in parts if desired.

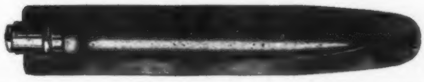
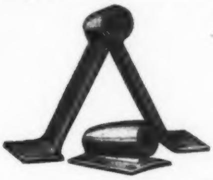


FIG. 154—UNIVERSAL SHAFT LOG

Columbian universal shaft logs are made in shaft diameters ranging from ⅞ inch to 2 inches.



Special Bronze Struts Designed for Babbitt or Cutless Rubber Bearings

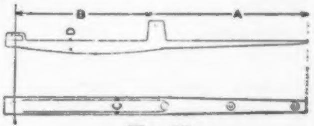
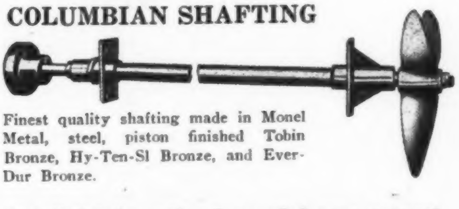


Fig. 390

SHOES OR SKEGS

Catalog No.	DIMENSIONS Inches A	B	C	D	Price Rough
391	18	14	2	¼	$6.50
392	20	15	2¼	5/16	7.50
393	21½	16	2½	⅜	10.00
394	24	17	2¾	½	12.00
395	26	18	3	½	15.00
396	28	20	3	½	18.00

COLUMBIAN SHAFTING



Finest quality shafting made in Monel Metal, steel, piston finished Tobin Bronze, Hy-Ten-Sl Bronze, and Ever-Dur Bronze.

No.	Size	Price Complete
301	9x14	$10.10
302	10x16	12.80
303	11x18	14.50
304	12x20	19.30

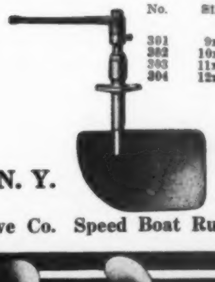


Fig. 300

Speed Boat Rudders

Detailed information forwarded upon request.

COLUMBIAN BRONZE CORP.
208 North Main Street Freeport, L. I., N. Y.

Representatives:
Detroit, Henry H. Smith & Co.; San Francisco, H. A. B. Sneve Co.

SKEGS
STRUTS
RUDDERS

CUTLESS
RUBBER
BEARINGS

STANDARDIZED CRUISERS AND EXPRESS CRUISERS

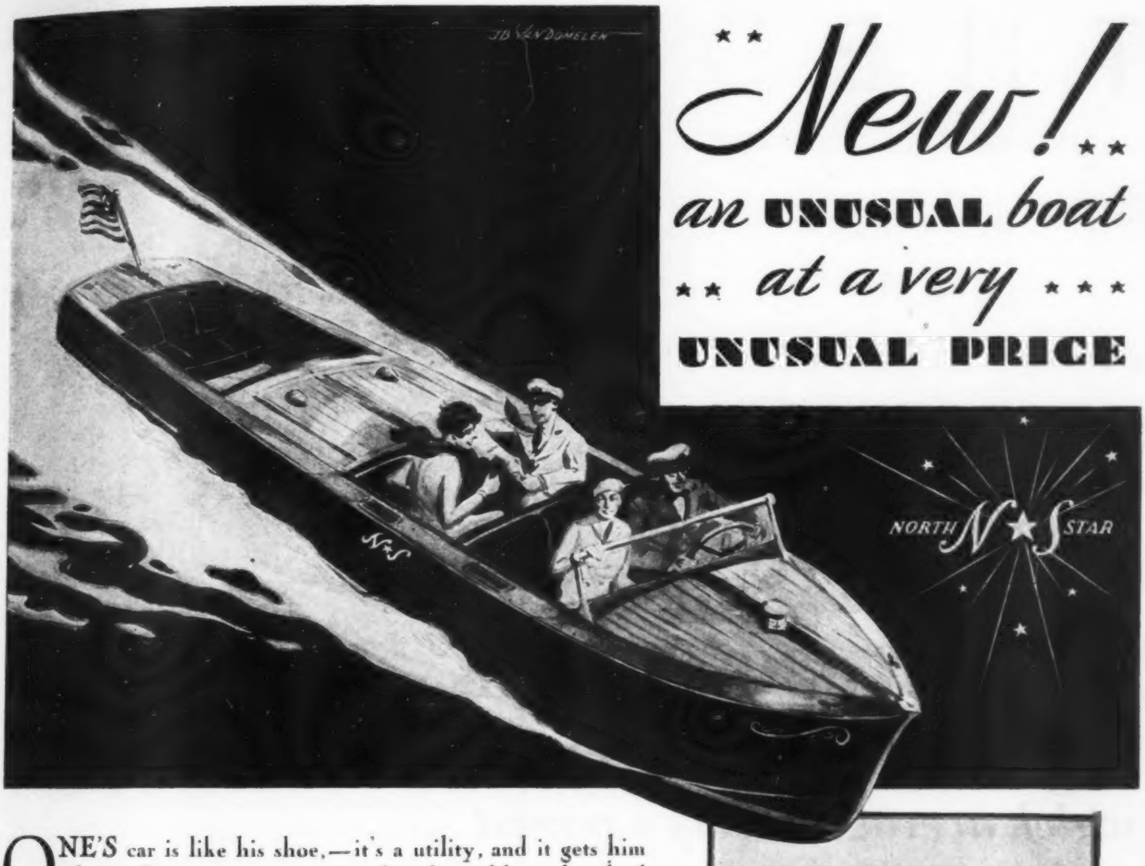
PRICES—SIZES—EQUIPMENT

(Continued from page 272)

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
MATTHEWS **Port Clinton, Ohio**												
38 Single Cabin	6850	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	125	17	abcdefghpqstuvwyzBCFGHJKLMOSUVW XYZ
38 Double Cabin (Open Bridge)	8450	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	125	16	abcdefghpqstuvwyzBCFGHJKLMSUVW XYZ
38 Double Cabin (Enclosed Bridge)	9400	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	125	15	
38 Day Cruiser (Open Bridge)	7900	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	125	16	abcdefghpqstuvwyzBCFGHJKLMOSUVW XYZ
38 Day Cruiser (Enclosed Bridge)	8850	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	125	15	
38 Sport Cruiser	7550	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	150	19	abcdefghpqstuvwyzBCFGHJKLMSUVW XYZ
38 DeLuxe, Double-Cabin Sport	11000	38-6	11-0	3-0	5-8	3-2	6-2	Round	Kermath	150	18	abcdefghpqstuvwyzBCFGHIJKLMSUVW XYZ
46 Single Cabin	12200	46-6	11-0	3-2	5-10	3-4	6-2	Round	Kermath	150	17	abcdefghpqstuvwyzBCEFGHJKLMOSUV WXYZ
46 Double Cabin (Open Bridge)	13500	46-6	11-0	3-2	5-10	3-4	6-2	Round	Kermath	150	17	abcdefghpqstuvwyzBCEFGHJKLMSUVW XYZ
46 Double Cabin (Enclosed Bridge)	14500	46-6	11-0	3-2	5-10	3-4	6-2	Round	Kermath	150	17	
46 Sport Cruiser	12800	46-6	11-0	3-2	5-10	3-4	6-2	Round	Kermath	150	18	abcdefghpqstuvwyzBCEFGHJKLMSUV WXYZ
46 DeLuxe Double Cabin Sport	15500	46-6	11-0	3-2	5-10	3-4	6-2	Round	Kermath	150	17	abcdefghpqstuvwyzBCDEFGHIJKLMSU VWXYZ
N. Y. YACHT, LAUNCH & ENGINE CO., N. Y. City												
77 Cruiser	69000	77-0	16-0	3-9	9-0	5-0	6-3	Round	20th Century	100	14	abcdefghipqsuvwxyzBCEFGHIJKLMQRST UVXYZ
OWENS **Annapolis, Md.**												
26 Cruiser	1680 up	26-0	7-2	2-0	3-7	2-6	5-9	Vee	Optional	40-110	14-24	abcdefghopqstuvwyzFGIJKLQSUVWXYZ
REABER **Seattle, Wash.**												
Speedcruiser	1850	22-0	6-10	2-0	....	....	5-1	....	Gray	30	15	
RICHARDSON CRUIS-ABOUT, N. Tonawanda, N. Y.												
29 Single Cabin	3585	29-0	8-10	2-6	4-4	3-0	5-11	Round	Gray	60	13	abcefghpqsuvwyzFGHIJKLMQSUWXY
29 Double Cabin	4185	29-0	8-10	2-6	4-4	3-0	5-11	Round	Gray	60	13	abcefghpqsuvwyzFGHIJKLMQSUWXY
RICKRUISER **New York, N. Y.** **30**	4850	39-0	8-6	2-3	....	......	6-0	Round	Optional	110	19	abcefgmopqsuvwyzBCEFGHIJLQSUWXYZ
ROBINSON SEA GULL												
Standard Sedan	14500	39-0	8-6	2-4	4-0	2-8	6-3	Vee	Optional	200	32	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMNPQRSUVWXYZ
Ford Cockpit Sedan	14750	39-0	8-6	2-4	4-0	2-8	6-3	Vee	Optional	200	32	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMNPQRSUVWXYZ
40 Cruiser	14500	40-0	9-6	2-6	5-0	3-0	6-6	Vee	Optional	200	30	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMNPQRSUVWXYZ
40 Twin Screw	16500	40-0	9-6	2-6	5-0	3-0	6-6	Vee	Scripps	150	32	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMNPQRSUVWXYZ
45 Twin Scr. Single Cabin	25000	45-0	10-0	2-8	5-0	3-0	6-6	Vee	Hall Scotts	240	36	abcdefghijklmnopqrstuvwxyzABCFGHIJK LMNPQRSUVWXYZ
45 Twin Scr. Dble. Cabin	30000	45-0	10-0	2-8	5-0	3-0	6-6	Vee	Hall Scotts	240	35	abcdefghijklmnopqrstuvwxyzABCFGHIJKL MNPQRSUVWXYZ
SEA BRIGHT DORY WKS **Long Branch, N. J.**												
26 Sea Skiff Cruiser	.....	26-0	9-0	2-0	3-8	2-8	5-0	Skiff	Buda	80	21	abcefghopqstuvwyzBEFGJKLQSUXY
30 Sea Skiff Cruiser	.....	30-0	10-3	2-6	4-4	3-1	6-0	Skiff	Sterling	195	22	abcefghopqstuvwyzBFGJKLQSUXY
36 Sea Skiff Cruiser	.....	36-0	12-6	2-9	4-6	3-3	6-2	Skiff	Sterling	150	18	abcefghopqstuvwyzBEFJKLQRSUXY
SEVEN SEAS CRUISER **Mystic, Conn.**												
Seven Seas Cruiser	......	50-0	11-4	3-0	6-6	4-6	6-3	Round	2 Sterlings	180ea	23	abcdefghijklmnopqstuvwxyzABCEFGHIJK LQRSTUVWXYZ
STAPLES JOHNSTON **Biddeford, Me.**												
Marblehead	5950	34-0	9-6	2-10	4-6	3-4	6-2	Round	Kermath	100	17	abcefghpqsuvwyzFGIJKLQRSUVWXYZ
STEPHENS **Stockton, Cal.**												
34	6500	34-3	9-0	2-6	4-9	2-9	6-0	Round	Scripps	80	16	abcdefghijklmnoqstuvwxyzABCFGHIJKL MQRSTUVWXYZ
43	13500	42-11	10-6	3-0	5-4	3-4	6-2	Round	2-Scripps	160	18	abcdefghijklmnopqstuvwxyzABCFGHIJK LMQRSTUVWXYZ
47	18250	47-0	10-10	3-2	5-4	3-4	6-3	Round	2-Scripps	400	30	abcdefghijklmnopqstuvwxyzABCFGHIJK LMQRSTUVWXYZ
50	19600	49-11	11-0	3-6	5-6	3-6	6-4	Round	2-Scripps	400	25	abcdefghijklmnopqstuvwxyzABCFGHIJK LMQRSTUVWXYZ
TOMS RIV. BT. CORP, INC. **Toms River, N. J.**												
Viking 24	2250	24-0	7-6	22-0	3-0	2-2	4-10	Round	Red Wing	50	14	abcefgsuvwyzFGJKLMSY
Viking 26	2800	26-0	8-0	24-0	4-0	3-6	5-10	Round	Gray	60	18	abcefgsuvwyzFGJKLMSY
Viking 30	3500	30-0	8-6	32-0	4-6	3-10	6-2	Round	Gray	72	18	abcefgsuvwyzFGJKLMSY
TOPPAN **Medford, Mass.**												
30 Sea Crest Exp. Cruiser	4950	30-0	7-6	2-0	4-6	2-6	6-2	Vee	Optional	100	20	abefgoqsuvwyzFGJKLSWXY
32½ Llenroc Exp. Cruiser	7250- 8250	32-6	8-6	2-6	5-0	3-0	6-2	Vee	Optional	200	35	abefghoqsuvwyzBFGJKLRSWXY
42 Llenroc Express Cruiser	18000- 22000	42-0	11-3	3-0	6-0	4-0	6-4	Vee	Optional	500	40	abefghoqsuvwyzBFGJKLRSWXY
VINYARD **Milford, Del.**												
Coastwise 50	21000	50-8	12-6	4-0	6-9	4-0	6-6	Round	Sterling	300	14½	abcdefghijklmnopqsuvwxyzABCEGHIJKL MQRSTUVWXYZ
Gulf Stream 55	27500	55-0	12-6	4-0	6-9	4-0	6-6	Round	Sterling	300	14½	abcdefghijklmnopqsuvwxyzABCEGHIJKL MQRSTUVWXYZ

***See Page 500 for Key to Equipment Symbols**

(Continued on page [illegible])

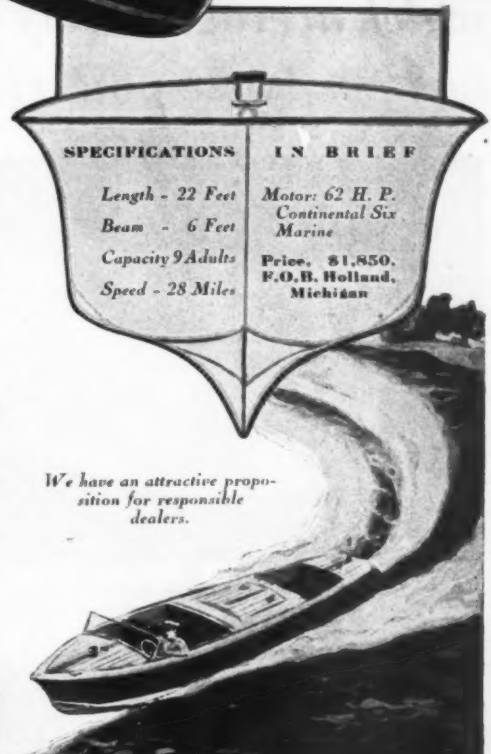


★★ New! ★★ an UNUSUAL boat ★★ at a very ★★★ UNUSUAL PRICE

ONE'S car is like his shoe,—it's a utility, and it gets him there. In appearance, it can be about like a hundred thousand others of the same make, and that's all right with him.

But on the water it's another story. The craft a man selects is his personal toy,—the last word in his array of indulgences and self expression. One's boat should be different, personal, distinctive. There is no "kick" in owning a runabout which is just like your neighbor's; and it is worse if the neighbor's is more striking.

That is the reason for NORTH STAR. Here, at last, is a craft which is really different,—modern in the extreme. The lines, fittings, controls, cockpits, performance abilities,—all are new, and unsurpassed in the entire large runabout field. Your information on boating is not complete until you know all about this remarkable new twenty-two footer of quality,—and our handsome booklet is waiting to tell you. Drop a line to us today, and a new channel to complete boating pleasure will be opened to you.



SPECIFICATIONS	IN BRIEF
Length - 22 Feet	*Motor: 62 H. P. Continental Six Marine*
Beam - 6 Feet	
Capacity 9 Adults	**Price, $1,850. F.O.B. Holland, Michigan**
Speed - 28 Miles	

We have an attractive proposition for responsible dealers.

NORTH STAR

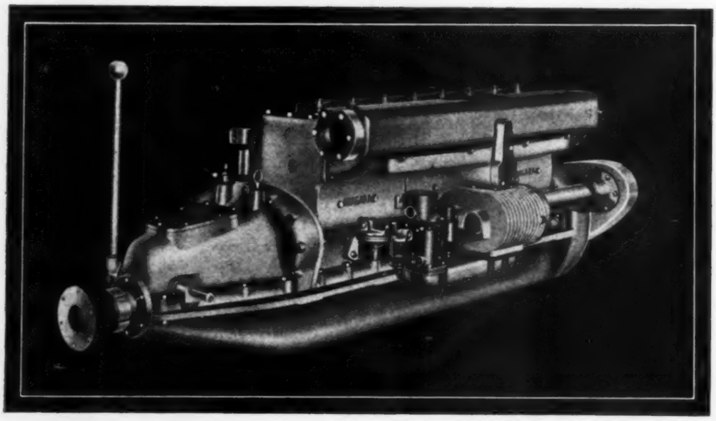
MARINE CONSTRUCTION CO.

HOLLAND.. MICHIGAN .. U.S.A.

THE POWER

The Sensation of the 1930 Season

... a series of Straight Eights which average nearly a pound less per horse power!



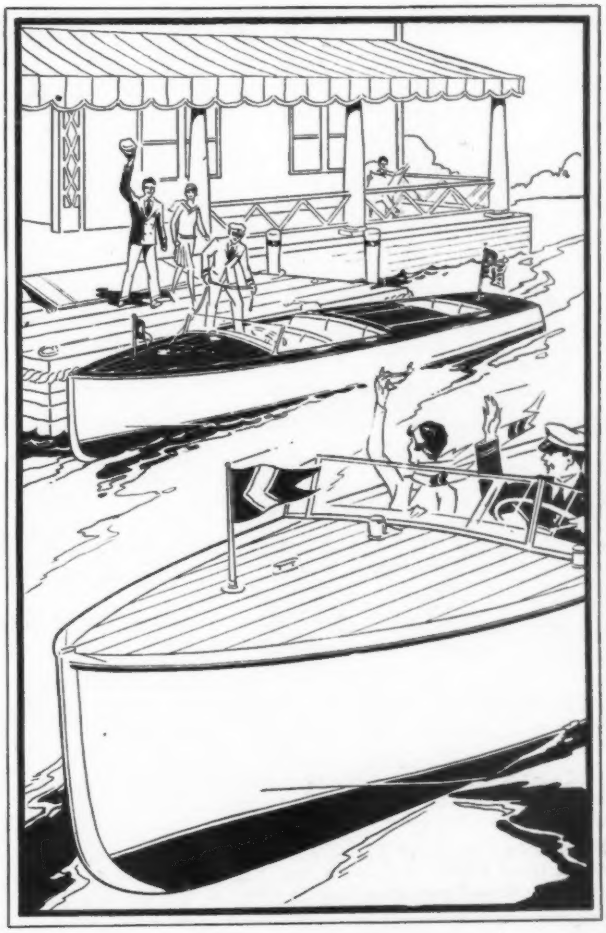
The new Niagara Eight with Supercharger

Model 8L—3⅝ x 4½—128-132 h.p. $1275
Model 8M—4 x 4½—152-156 h.p. $1475
Supercharger Models - 165 H.P. and 200 H.P., $1775 and $1975

GREATER strength with less bulk! Greater horse power with less weight! Two remarkable results of the use of a new non-corrosive aluminum alloy. Two basic reasons why the new *Niagara Straight Eights* are fully a year in advance of the entire marine engine field!

The Niagara Model 8L develops 128 to 132 H.P. yet weighs only 869 pounds . . . Model 8M delivers 152 to 156 H.P. yet weighs only 882 pounds! . . . an average of one pound less per H.P. in comparison with engines of similar capacity. Obviously, carrying less

OF NIAGARA



CALL FROM DOCK:
"Keep on going, big boy. We'll catch up in no time —we're carrying 108 pounds less with this Niagara Straight Eight"

weight per H.P. means proportionate increases in speed, proving again the advantage of 25 years building only fine marine engines. Whether for replacement or a new boat —don't fail to see these new engines at the Motor Boat Show; Supercharger equipment is a revelation in power boosting; also full line of *Niagara 4 cylinder engines*—on exhibition at Booth 425—or write for complete information.

NIAGARA MOTORS CORP.
206 Niagara Boulevard
Dunkirk - New York

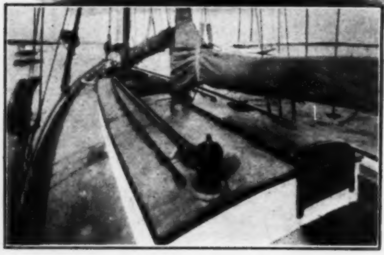
Niagara
MARINE ENGINES

SUPERIOR MARINE ENGINES—STRAIGHT 8's... HIGH SPEED 4's

Under Construction *and* Offered *for* April Delivery

EASTWARD

This handsome schooner, 47′ 6″ over all, 34′ 6″ water line, 11′ 8″ beam and 6′ 5″ draft, has a speed of 7½ knots under power. Originally built for our own use in 1927, it has attracted widespread attention. Five duplicates have been sold to enthusiastic owners.



Read What Owners and Captains Have to Say

***Sandy Moffat*—Commodore, Mass. Bay Division, Cruising Club of America. "Of the 10 yachts I have owned—this is certainly the best mannered."**

***Frederic M. Gardiner* —Beverley Farms, Mass. who sailed the Primrose to Europe and return. "Just my idea—her lines are great."**

***Ward Robinson*—Lake Shore Athletic Club, Chicago. "Won from Yawls, Schooners and Racing Machines. She is great and very able."**

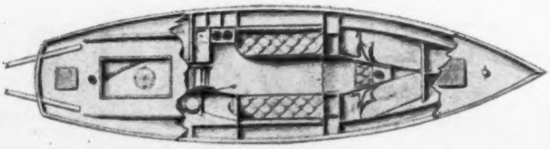
***W. Stuart Glazier*—Eddy Bros., Hartford, Conn. "Raced against a 70′ also a 45′ schooner, beat the smaller boat 25 minutes, boat for boat, the larger by 10 minutes on time allowance—lead her to the last mile when wind dropped."**

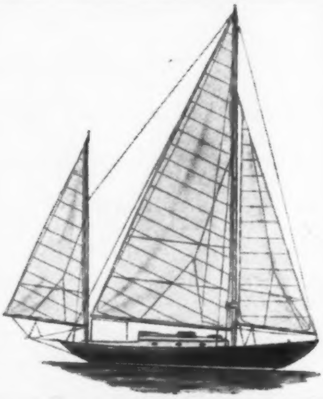
***Capt. Egan*—who took both schooners to Chicago. "Hove-to—45 hours in gale—sailed 125 miles—blowing 50 miles per hour—best sea boat ever stepped on."**

***James R. Offield*—President Lake Shore Athletic Club, Chicago, is an enthusiastic owner.**

EASTWARD JR.

This seagoing auxiliary yawl has all the characteristics of the Schooner Eastward. Principal dimensions are: 36′ 9″ o. a., 25′ w. l., 9′ 11″ beam, 5′ 6″ draft. Very reasonably priced.





Both Eastward and Eastward, Jr. are fine yachts for cruising or racing and are very reasonably priced.

Write today for plans and details.

Naval Architects

ELDREDGE-McINNIS, Inc.

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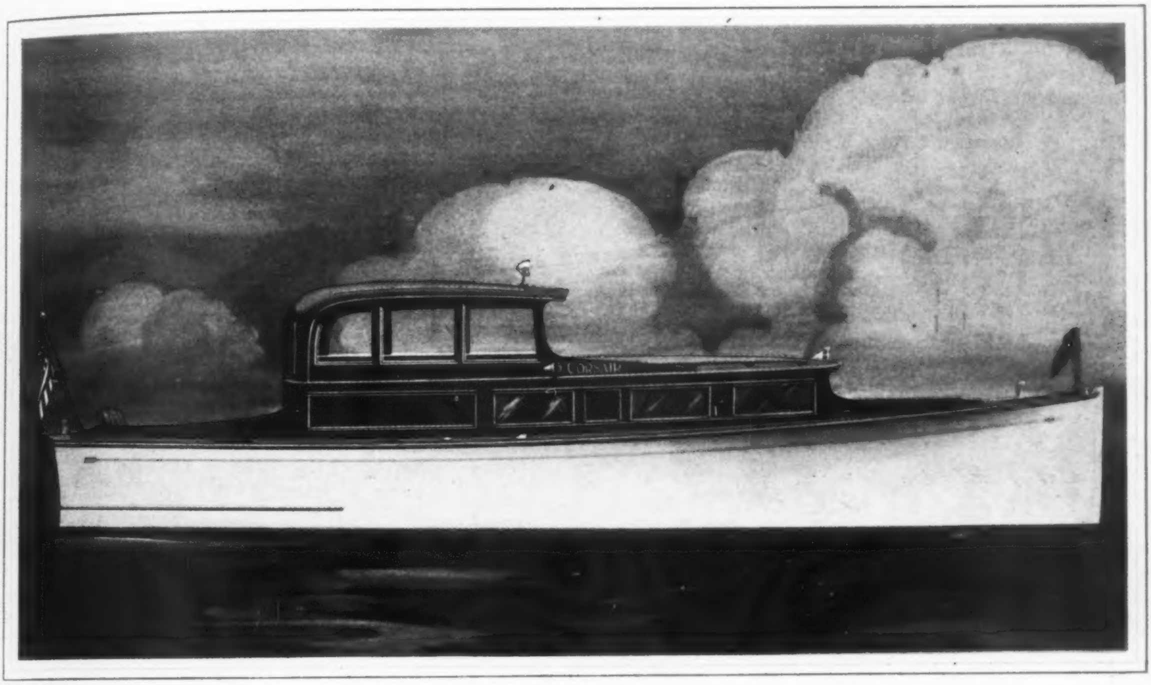
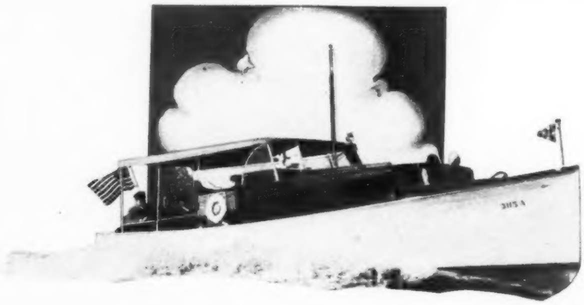
Yacht Brokers

The CORSAIR



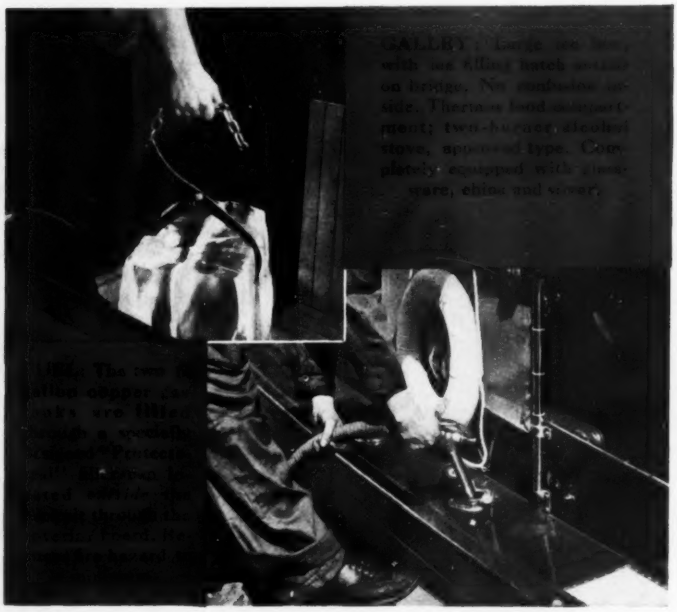
Thirty Six Foot Cruiser for 1930

CORSAIR CRUISERS



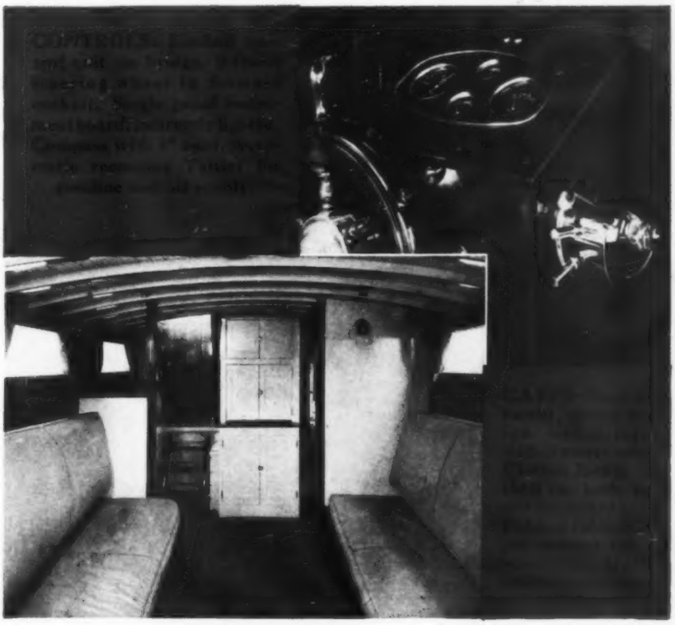
. . . Created to Bring You Pleasure and Pride

A cabin that's roomy and comfortable . . . downy bunks, four of them, that conjure sleep . . . luxurious, open cockpits, forward and aft, that are zestfully inviting . . . an enclosed deck house, with sedan type windows designed by LeBaron and custom-built by master craftsmen . . . restful wicker chairs . . . a cooling draught or a splendid meal from the most complete galley you can imagine, while the wind whips by unheeded. Off for a tea-time turn of the harbor . . . a fishing trip . . . an extended cruise . . . or one of those vagabonding little pilgrimages that delight the old salt's heart. Can you picture a craft to bring you greater pleasure? . . . ¶ A hull that's sleek and trim . . . long, flowing lines that seem to melt away in the wake . . . the LeBaron deck house lending unique distinction . . . appointments that are lavish and intriguing to the most minute detail. At the yacht club float . . . brisking about the bay while the fleet looks on . . . or turning her nose toward far horizons, where strange faces and places will hail a splendid craft with the reception that is its due. You cannot help but be proud of your Corsair, for it ranks with the finest craft afloat. Until you have seen and tried it you can have no conception of all it is possible to incorporate in a craft of moderate size and price.



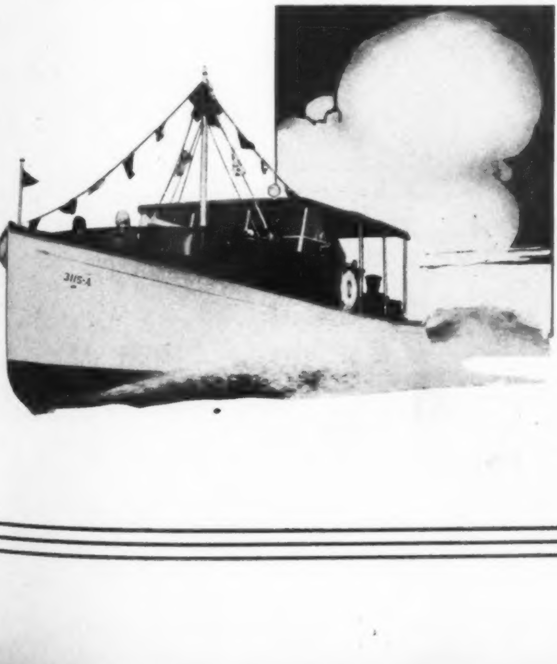
GALLEY: Large ice box, with ice filling hatch outside on bridge. No confusion inside. Thermos food compartment; two-burner alcohol stove, approved type. Completely equipped with glassware, china and silver.

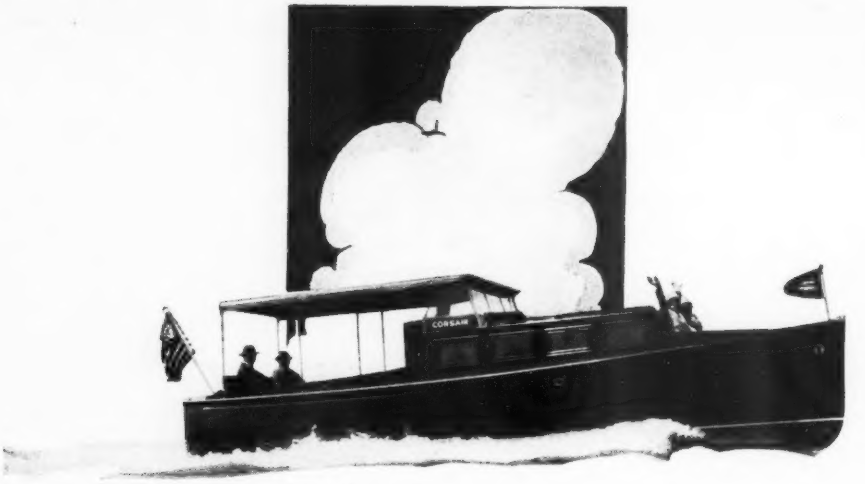
[illegible] The two [illegible] copper [illegible] tanks are filled [illegible]



SPECIFICATIONS

This great new Corsair is thirty-six feet overall, with a beam of nine feet, ten inches and a draft of two feet, eight inches. The keel, frames, floor and deck beams are all of white oak; the planking and cabin trunk of Philippine mahogany. The power plant is a Scripps Model 202-200 horsepower engine with a speed of 22-24 m.p.h. There is a 53-gallon fresh water tank. The toilet has tiled walls and linoleum covered floor, mirror and medicine rack; all fittings nickel plated. The spacious galley is completely enclosed, with sliding panel in the forward galley wall making an open buffet. Cabin, galley, deck and running equipment are complete, from bedding and chinaware to flag poles and ensign. A "C-O-Two" fire extinguishing system will extinguish fire automatically. The open model has a stream line windshield and hand collapsible top (illustrated). The closed model has the distinctive LeBaron custom-built deck house (illustrated on cover).





The Corsair Thirty-Foot Cruisader

The Cruisader is as fine a craft for its size as the new Thirty-Six. Thirty feet overall, it has a beam of nine feet, three inches, and a draft of two feet, six inches. Power plant is a Chrysler Imperial Marine Engine, with reduction gear, giving a speed of 18-20 m. p. h. Two open cockpits . . . toilet . . . galley . . . many refinements that feature the Corsair Thirty-Six Foot Cruiser are available on a slightly lesser scale in the thirty-foot Cruisader. Both craft are built by the Corsair Boat Company in its own modern, completely equipped yards at Trenton, Michigan. The Corsair Crest which identifies them stands for quality above all else . . . and for production methods and master craftsmanship that deliver unusually splendid craft at remarkably reasonable figures.

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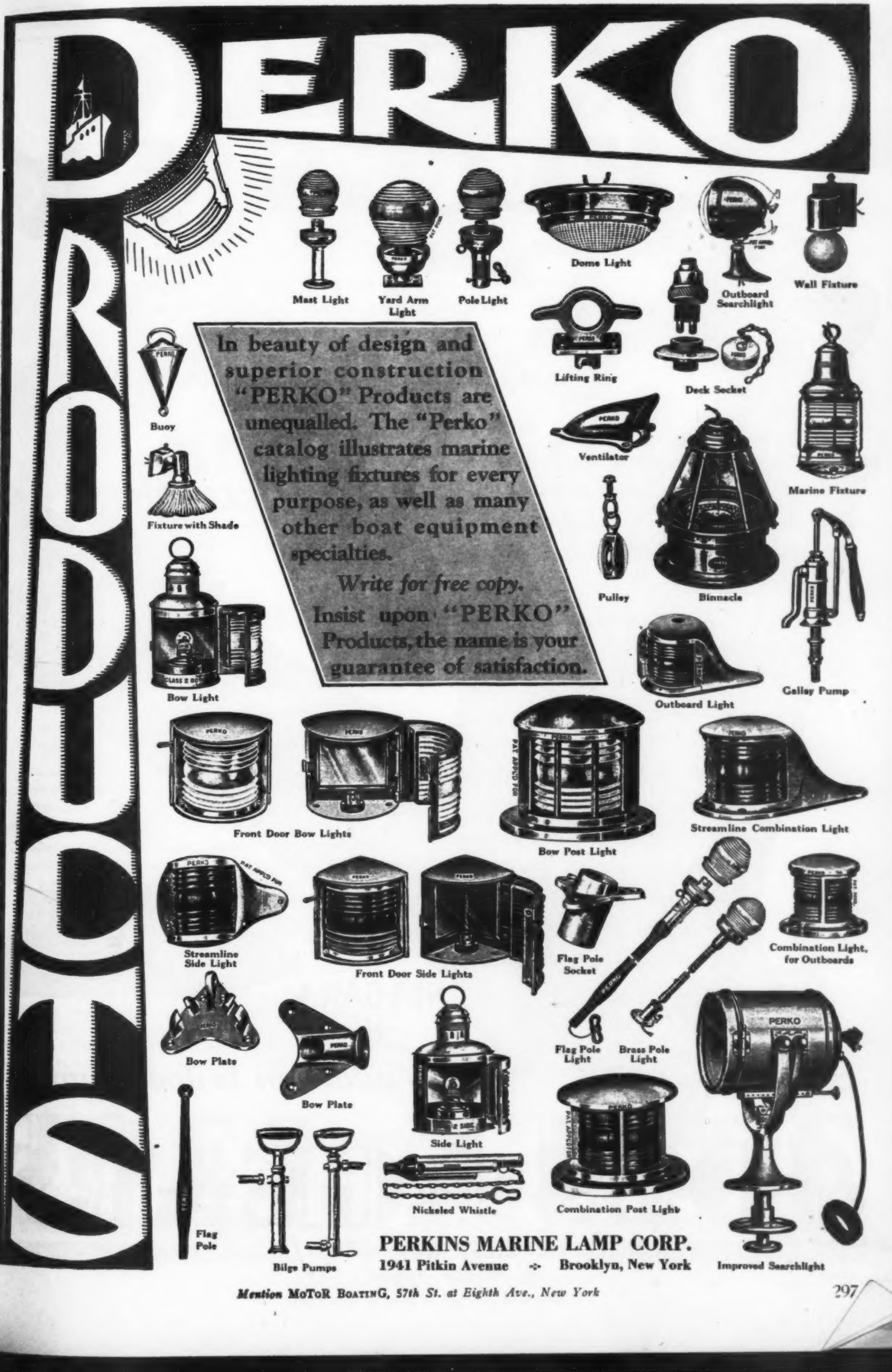
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Pulley
Binnacle
Bow Light
Outboard Light
Galley Pump
Front Door Bow Lights
Bow Post Light
Streamline Combination Light
Streamline Side Light
Front Door Side Lights
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Combination Light, for Outboards
Bow Plate
Bow Plate
Flag Pole Light
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Side Light
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The engine builder thinks long and hard before he standardizes on a reverse gear . . . for it immediately becomes a part of *his* product! If it works smoothly, the customer is happy. If not, he blames the *whole outfit!* Fifty-two engine builders have adopted Joes as standard and more are fixin' to join the family! *Does that answer your question?*

Old Man Joe

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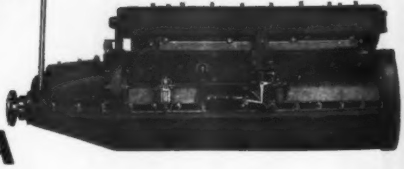

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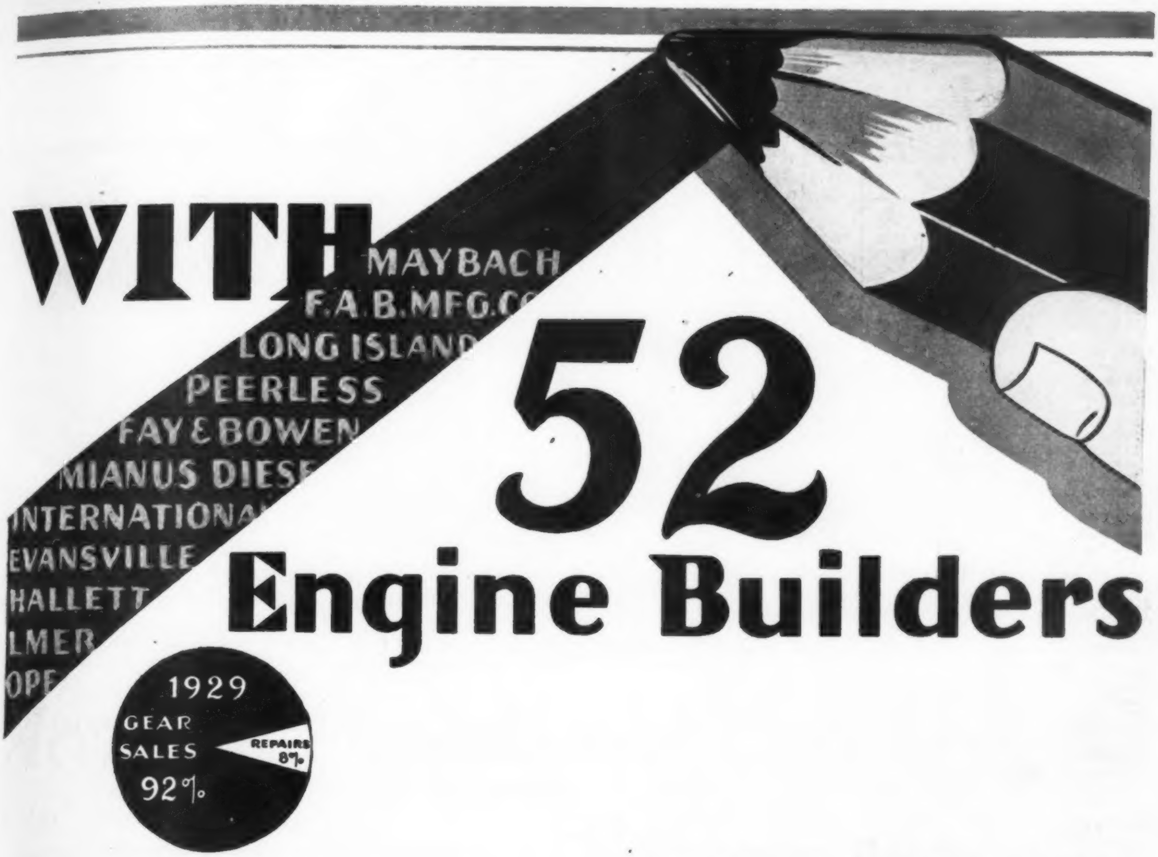
of Motor Speed

WITH 52 Engine Builders



The repair parts business a manufacturer does is a pretty accurate index to his ability to make a good product.

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JOES FAMOUS REVERSE GEARS

REVERSE 80%~88%
of Motor Speed

STANDARDIZED RUNABOUTS, SEDANS AND OPEN BOATS

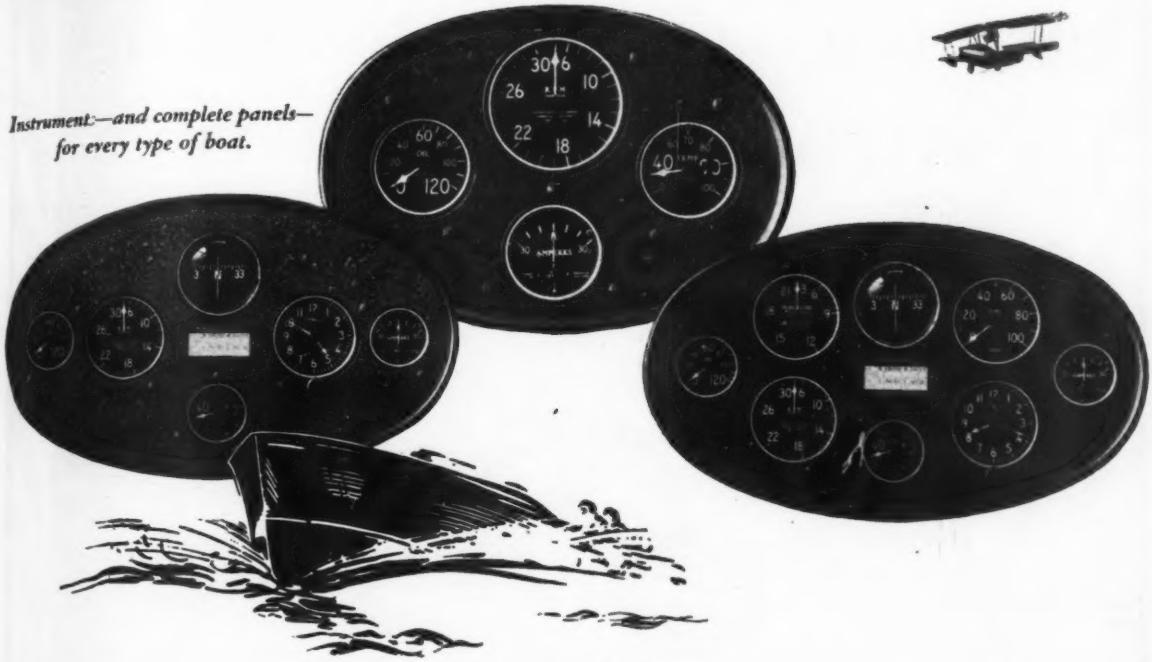
PRICES—SIZES—EQUIPMENT

(Continued from page 153)

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
DYER MOTORCRAFT **East Greenwich, R. I.**												
21 Runabout	On App.	21-0	5-9½	1-10	2-11	2-3	....	Round	Optional	135	38	abcdertvwyzBFJLMSWXYZ
21 Sedan	On App.	21-0	5-9½	1-10	2-11	2-3	....	Round	Optional	135	35	abcdefvwyzBFGHJLMSWXYZ
21 Yacht Tender	On App.	21-0	5-9½	1-10	2-11	2-3	....	Round	Optional	....	....	abcdefstvwyzBFGHJLMQSWXYZ
26 Runabout*	On App.	26-0	6-6	1-10	3-0	2-3	....	Round	Optional	200	40	abcdefgvwyzBFJLMSWXYZ
26 Sedan*	On App.	26-0	6-6	1-10	3-0	2-3	....	Round	Optional	200	40	abcdefvwyzFLMSWXYZ
26 Yacht Tender*	On App.	26-0	6-6	1-10	3-0	2-3	....	Round	Optional	200	40	abcdeftvwyzFGHLMQSWXYZ
26 Fisherman*	On App.	26-0	6-6	1-10	4-6	2-3	4-0	Round	Optional	200	40	abcdefghopqvwyzFGHIJKLMWXYZ
	* Single or twin screw.											
HACKER **Mt. Clemens, Mich.**												
24 Open	....	24-0	6-4	1-9	2-6	1-8	....	Vee	Gray	125	35	abcdefgstuvwxyzBCLMFQSWY
24 Sedan	....	24-0	6-4	1-9	2-6	1-8	....	Vee	Gray	125	33	abcdefgstuvwxyzBCFGHKLMQSWY
26 Open	....	25-11	7-0	1-11	2-7	1-9	....	Vee	Kermath	200	42	abcdefgstuvwxyzBCFGJKLMQSWY
26 Sedan	....	25-11	7-0	1-11	2-7	1-9	....	Vee	Kermath	200	40	abcdefgstuvwxyzBCFGHJKLMQSWXY
30 Sport	....	30-0	7-0	1-11	2-7	1-9	....	Vee	Kermath	200	40	abcdefgstuvwxyzABCFJKLMQSWXY
24 Runabout	3150	24-0	6-6	1-10	2-6	1-9	....	Vee	Gray	125	35	abcdefghstuvwyzBCFMQSXY
26 Runabout	4475	26-0	7-0	2-0	2-8	1-9	....	Vee	Kermath	200	43	abcdefhstuvwyzBCFMQSXY
30 Runabout	5500	30-0	7-0	2-0	2-8	1-9	....	Vee	Kermath	200	41	abcdefhstuvwyzBCMFQSXY
38 Sedan	17000	38-0	8-5	2-3	....	....	....	Vee	2-Kermaths	400	42	abcdefhstuvwyzBCFGMQSXY
HADLEY PLANE **Ozone Park, L. I., N. Y.**												
One Step 151-Hydro	3000	17-0	5-0	....	2-0	1-0	....	Vee-Step	Miller-4	110	52	tvBC
Three Step 151-Hydro.	3500	18-0	5-2	....	2-0	1-0	....	Vee-Step	Miller	110	52	tvBC
For'd Cockpit 151-Hyd.	3650	18-0	5-2	....	2-4	1-0	....	Vee-Step	Miller	110	52	atvzBC
JARDINE **Atlantic City, N. J.**												
Baby Skiff	1800	20-6	5-6	1-8	2-6	1-8	....	Skiff	Gray	60	21	abcdefstuvwyzBCFJKLMQSVWXY
Flying Fish, Jr.	3250	24-0	6-6	2-0	2-10	1-10	....	Skiff	Gray	125	24	abcdefstuvwyzBCFJKLMQSVWXY
KING SEA SKIFF **Highlands, N. J.**												
26 Open	2125	25-11	7-4	2-0	3-6	2-10	....	Sea Skiff	Scripps	100	22	abcfrstuvwyzIJKLSVY
28 Open	2325	28-0	8-0	2-0	4-0	3-4	....	Sea Skiff	Scripps	100	20	abcfstuvwyzIJKLSVY
28 Sedan	3575	28-0	8-0	2-0	4-6	3-4	6-0	Sea Skiff	Scripps	100	20	abcefstuvwxyzBFIJKLQSVWXY
LUDINGTON **Philadelphia, Pa.**												
Sportcar	....	17-0	5-2	....	1-8	1-6	....	Vee	Gray	37	30	abcfsuvwzBCWXY
Sportcar De Luxe	....	17-0	5-2	....	1-8	1-6	....	Vee	Gray	37	30	abcfsuvwzBCFLMQWXY
NORTH STAR **Holland, Mich.**												
Runabout	1850	22-0	6-0	2-0	2-3	1-6	....	Vee	Continental	62	28	abcefhtvwyzFJLMSWY
OWENS **Annapolis, Md.**												
20 Runabout	980	20-0	6-0	2-0	....	....	....	Vee	Optional	40-110	22-35	abcdefstuvwyzBFJKLQSVWXYZ
SEA-LYON **532 Lexington Av., N.Y.C**												
30	2675	24-0	6-2	1-10	2-3	1-9	....	Vee	Chrysler	75	30	abcdefstuvwyzBCFJKLMQSVWXYZ
35	2975	24-0	6-2	1-10	2-3	1-9	....	Vee	Chrysler	110	35	abcdefstuvwyzBCFJKLMQSVWXYZ
40	4650	28-0	6-7	2-2	2-9	2-0	....	Vee	Scripps	200	42	abcdefstuvwyzBCFJKLMQSVWXYZ
40	4650	28-0	6-7	2-2	2-9	2-0	....	Vee	Kermath	200	44	abcdefstuvwyzBCFJKLMQSVWXYZ
45	5950	30-0	7-0	2-1	2-10	1-11	....	Vee	Sterling	200	45	abcdefstuvwyzBCFJKLMQSVWXYZ
46	6500	30-0	7-0	2-1	2-10	1-11	....	Vee	Sterling	200	45	abcdefstuvwyzBCFJKLMQSVWXYZ
60	12500	36-0	8-0	2-3	2-11	2-1	....	V-Hydr	Liberty	425	55	abcdefstuvwyzBCFJKLMSVWXYZ
SEA SLED												
22 Runabout	3195	22-5	5-10½	1-6	2-1½	1-10	....	Inv. Vee	Optional	110	30	abcdeftvwyzBFJLQSVWX
26 Runabout	4995	25-10½	6-8	1-8	2-3	2-0	....	Inv. Vee	Kermath	200	42	abcdefyvwyzBCFJKLQSVWX
28 Runabout (Open)	8000	27-5½	6-11	1-10½	2-7	1-9	....	Inv. Vee	Hall-Scott	200	40	abcdefsvwyzABCFJKLQSVWXY
28 Sedan	8500	27-5½	6-11	1-10½	2-7	1-9	....	Inv. Vee	Hall-Scott	200	40	abcdefsvwyzABCFJKLQSVWXY
SUNFLOWER **Lake Tomahawk, Wis.**												
Sunflower 23	2200-2800	23-0	6-0	....	....	....	....	....	Gray	60-130	....	
TOPPAN **Medford, Mass.**												
16 Family Skiff	490	16-3	5-6	1-3	3-0	2-6	....	Dory	Universal	8	11	LSY
18 Family Skiff	815	18-3	6-0	1-4	3-4	2-10	....	Dory	Universal	15	16	LSY
22 Dory	1075	22-0	6-0	1-6	3-7	3-2	....	Dory	Universal	15	12	LSWY
18 Swampscott Dory	490	18-0	5-0	1-3	3-0	2-8	....	Dory	Universal	8	10	LS
VENTNOR **Atlantic City, N. J.**												
26-B	2850	26-0	6-0	1-8	2-8	2-2	....	Vee	Gray	125	35	abcdefstuvwxyzABCFJKLMQSVWXY
26-A	2400	26-0	6-6	1-8	2-8	2-2	....	Vee	Gray	72	26	abcdefstuvwxyzABCFJKLMQSVWXY
36	8500	35-6	8-6	2-4	3-8	2-10	....	Vee	Lee-Liberty	400	50	abcdefstuvwxyzABCFJKLMQSUVWXY
GAR WOOD **Detroit, Mich.**												
30 Runabout	3150	28-0	7-2	2-0	2-11½	2-2¼	....	Vee	Chrysler	125	32	abcdefstuvwyzBCFJKLMQSVWXYZ
30 Sedan	3650	28-0	7-2	2-0	2-11½	2-2¼	4-2	Vee	Chrysler	125	30	abcdefstuvwyzBCFGHJKLMQSVWXYZ
40 Runabout	4700	28-0	7-2	2-1	2-11½	2-2¼	....	Vee	Optional	200	42	abcdefstuvwyzBCFJKLMQSVWXYZ
40 Sedan	5300	28-0	7-2	2-1	2-11½	2-2¼	4-2	Vee	Scripps	200	40	abcdefstuvwyzBCFGHIKLMQSVWXYZ
40 Limousine	5550	28-0	7-2	2-1	2-11½	2-2¼	4-2	Vee	Scripps	200	40	abcdefstuvwyzBCFGKLMQSVWXYZ
50 Runabout	8950	33-0	7-2	2-6	3-3	2-5	....	Vee	Gar Wood	425	50	abcdefstuvwyzABCFIJKLMQSVWXYZ
50 Limousine	10950	33-0	7-2	2-6	3-3	2-5	4-10	Vee	Gar Wood	425	48	abcdefstuvwyzABCFGIJKLMQSUVWXYZ
55 Runabout	10950	33-0	7-2	2-6	3-3	2-5	....	Vee	Gar Wood	525	55	abcdefstuvwyzABCFIJKLMQSVWXYZ
55 Limousine	12950	33-0	7-2	2-6	3-3	2-5	41-0	Vee	Gar Wood	525	53	abcdefstuvwyzABCFGIJKLMQSVWXYZ

*KEY TO EQUIPMENT SYMBOLS

a—Anchor
b—Anchor Lines
c—Dock Lines
d—Fenders
e—Cushions
f—Life Preservers
g—Mattresses
h—Springs
i—Bedding
j—Blankets
k—Table Linen
l—China
m—Glassware
n—Silverware
o—Galley Equipment
p—Stove
q—Ice Box
r—Radio
s—Bilge Pump
t—Bailers
u—Whistle
v—Fire Extinguisher
w—Running Lights
x—Searchlight
y—Electric Lights
z—Storage Battery
A—Clock
B—Tachometer
C—Motometer
D—Charts
E—Chart Case
F—Windshield
G—Awning or Top
H—Side Curtains
I—Compass
J—Fog Horn
K—Bell
L—Pilot Rules
M—Flags
N—Signal Code Flags
O—Sails
P—Oil Skins
Q—Boat Hook
R—Boarding Ladder
S—Tools
T—Dinghy
U—Table
V—Chairs
W—Floor Covering
X—Upholstery Inside
Y—Locker Space
Z—Chemical Extinguisher



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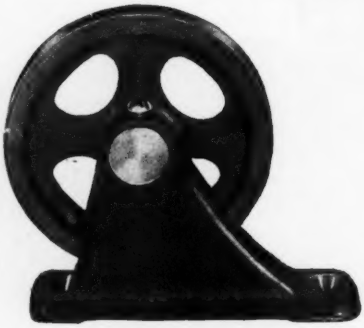

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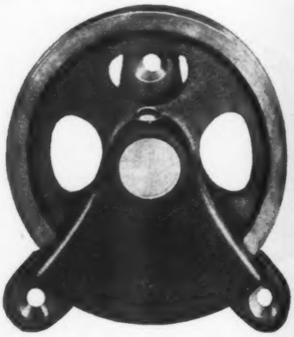

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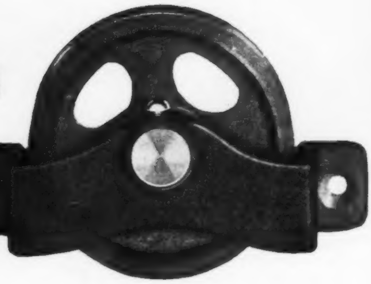

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WITH AND WITHOUT
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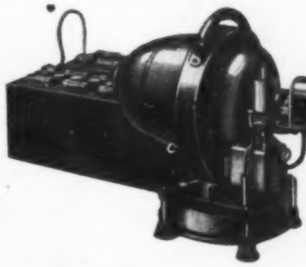

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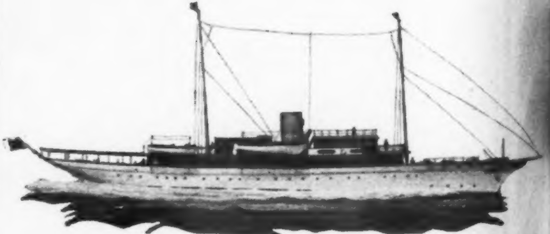

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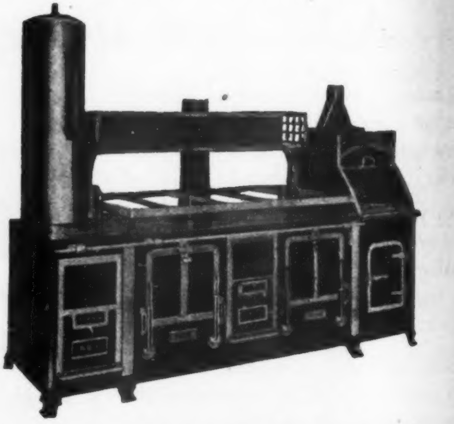
"	SEAFORTH	*W. J. Matheson*
"	VANDA	*E. B. Dane*
"	NAKHODA	*F. J. Fisher*
"	RENE	*A. P. Sloan, Jr.*
"	CAMBRIONA	*W. O. Briggs*
"	LOTOSLAND	*Col. Edw. A. Deed*



But also in the Merchant Marine and United States Government Service

M/s CITY OF NEW YORK . . .	*African Line*
" PACIFIC SUN	*Sun Oil Company*
S/S FAIRFIELD CITY	*Isthmian Line*
L. H. TENDER WILLOW	*U. S. Government*

ELISHA WEBB & SON CO.

Manufacturers of
Marine Cooking Apparatus Exclusively
136 South Front Street
PHILADELPHIA, PENNA.

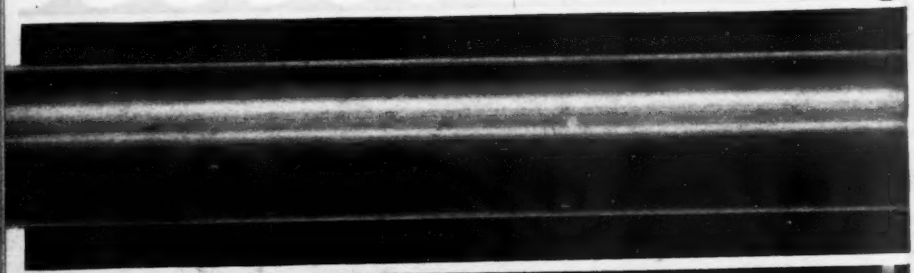
ANACONDA SHAFTING
selected by
7 out of every 8
EXHIBITORS
at the
NEW YORK SHOW

TOBIN BRONZE ❖ EVERDUR METAL

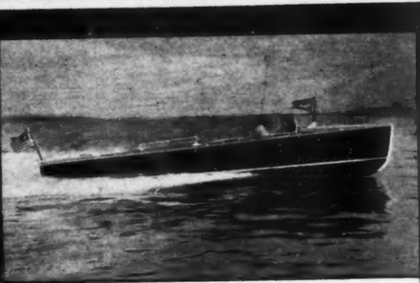
TOBIN BRONZE
Standard of the Industry since 1885

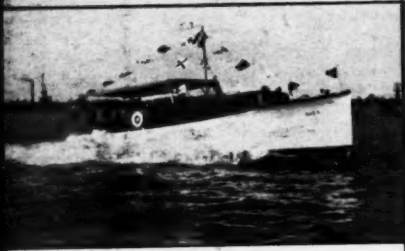
EVER since the first motor boat was launched in 1885, Tobin Bronze, because of its strength, ductility and resistance to corrosion, has been the almost unanimous choice of the industry for propeller shafting and under-water parts. Within the past month, Tobin Bronze has been selected for plating the hulls of three of the four yachts which will compete for the honor of defending America's Cup against Sir Thomas Lipton; the fourth defender candidate is to have a composite hull which will be fastened with Everdur, another Anaconda product. Everdur Metal is an alloy of copper, silicon and manganese which combines unusual corrosion-

THE AMERICAN
GENERAL OFFICES:

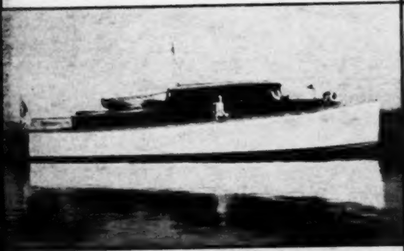


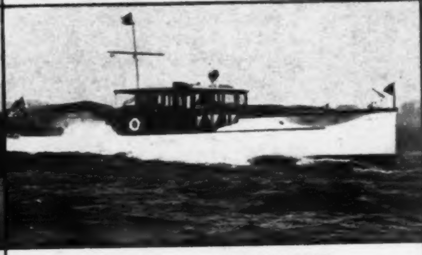
ELCO "50" CRUISER


BABY GAR "40" RUNABOUT


CORSAIR "36" CRUISER

MATTHEWS "46" SPORT CRUISER


HUCKINS FAIRFORM FLYER


LUDERS "72" COMMUTER

FLEETWING 50' CRUISER

CHANCE 75' CRUISER

DEE-WITE "MODEL 9" RUNABOUT

STAPLES-JOHNSON 34' CRUISER

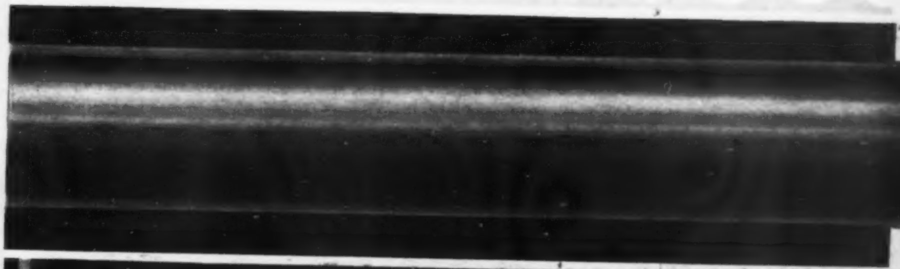
EVERDUR METAL

Great strength and corrosion resistance

resistance with the strength of medium carbon steel. This strength makes it an ideal metal for bolts, nuts, screws and castings and also for shafting in high speed boats.

In this year's Motor Boat Show, seven out of every eight boat builders exhibiting are using either Tobin Bronze or Everdur shafting as standard equipment. In addition eight exhibitors have selected Everdur Metal for screws, bolts, nuts and other fastenings on all models. Other Anaconda Products used extensively in boat construction are copper for fuel lines and tanks; copper and brass exhaust pipes; brass sheets for rudder-plates; nickel silver for trim and cut-waters, etc.

BRASS COMPANY
WATERBURY, CONN.



SEA LYON "45" RUNABOUT

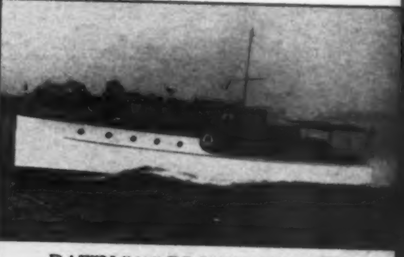
A. C. F. 38' TWIN SCREW CRUISER

CONSOLIDATED 66' COMMUTER

SEA-SLED "22" RUNABOUT

WHITNEY "35" CRUISER

HUBERT JOHNSON 38' CRUISER



DAWN "48" DE LUXE CRUISER

CHASE-EMERSON RUNABOUT

HUMPHRIES "45" CRUISER

HACKER "38" SEDAN RUNABOUT

Users of

TOBIN BRONZE and EVERDUR

Exhibiting at the New York Show

The Aeolian Company — New York City
All Models—Everdur Shafting

American Car and Foundry Company, New York City
A.C.F. All Models—Tobin Bronze Shafting

Atlas Boat Corporation — Menominee, Mich.
All Models—Tobin Bronze Shafting

Auto-Hydro-Craft, Inc. — Boston, Mass.
All Models—Tobin Bronze Shafting

Banfield Sea Skiff Works, Atlantic Highlands, N. J.
22' Runabout—Everdur Shafting

Louis Bossert & Sons, Inc. — Brooklyn, N. Y.
Bossert Power Houseboat—Everdur Shafting

Cape Cod Ship Building Corp. — Wareham, Mass.
Tobin Bronze Shafting

Chance Marine Construction Co., Inc.,Annapolis,Md.
All Models—Tobin Bronze Shafting

A. B. Chase-Emerson Corporation — New York City
"RV" Inboard—Tobin Bronze Shafting

Consolidated Shipbuilding Corp. — New York City
All Models—Tobin Bronze Shafting

Corsair Boat Company — Detroit, Mich.
Models "30" and "36"—Tobin Bronze Shafting

Dawn Boat Corporation — New York City
Dawn "45" and "48 De-Luxe"—Tobin Bronze Shaft

Delaware Bay Shipbuilding Co., Inc. Leesburg, N. J.
Debasco—Tobin Bronze Shafting, Everdur Fastened

Dunphy Boat Mfg. Co. — Eau Claire, Wis.
17' Model, Tobin Bronze 18' 6" Everdur Shafting

Dwight Lumber Company, — River Rouge, Mich.
Dee-Wite, 4, 5, 6, 7, 8, 9—Tobin Bronze Shafting

Dyer Motorcraft Corporation — E. Greenwich, R. I.
Models "21," "26" Tobin Bronze Shafting

The Elco Works — Bayonne, N. J.
All Models—Tobin Bronze Shaft, Everdur Fastened

Gar Wood Inc. — Detroit, Mich.
All Models—Tobin Bronze Shaft, Everdur Fastened

Greenport Basin & Const. Co. — Greenport, N. Y.
Fleetwing, All Models—Everdur Shafting;
Fastenings; Underwater Parts

Hacker Boat Company — Mt. Clemens, Mich.
Hackercraft—Everdur Fastened; "38"—Everdur Shaft

Huckins Yacht Corporation — Jacksonville, Fla.
Fairform Flyer, All Models—Everdur Shafting

Frederic P. Humphreys, Inc. — New York City
All Models—Tobin Bronze Shafting

Hubert S. Johnson — Bay Head, N. J.
Standard Models—Everdur Shafting

Luders Marine Construction Co. — Stamford, Conn.
72' Commuter—Tobin Bronze Shafting

Howard W. Lyon, Inc. — New York City
Sea Lyon, all models—Tobin Bronze Shafting

The Matthews Company — Port Clinton, Ohio
All Models—Tobin Bronze Shafting

Millard, Brewster & Chambers — New York City
Everdur Fastened "D-1"—Tobin Bronze Shafting

Richardson Boat Co. Inc. — N. Tonawanda, N. Y.
All Models—Tobin Bronze Shafting

Robinson Marine Const. Co. Benton Harbor, Mich.
Seagull, All Models—Everdur Fastened

The Sea Sled Corporation — New York City
Models "17," "22," "26," "28"—Tobin Bronze Shafting

Staples, Johnson & Co. — Biddeford, Me.
All Models—Everdur Shafting

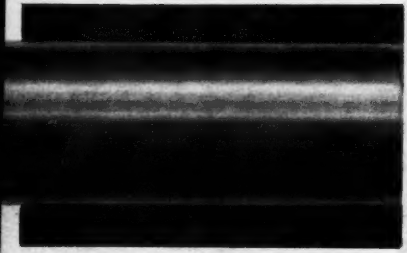
Wheeler Shipyard — Brooklyn, N. Y.
Wheeler Playmate "22," "26," "29," "33"—Tobin Bronze
"36," "40," "44"—Everdur Shafting

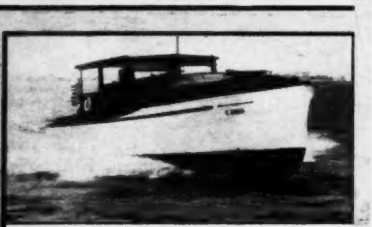
Whitney Woodcraft Corp. — E. Hartford, Conn.
Models "35" and "41"—Tobin Bronze Shafting

Trade-marks "Tobin Bronze" and "Everdur" Reg. U.S. Pat. Off.

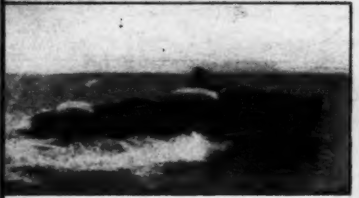
ANACONDA

AEOLIAN 20' RUNABOUT

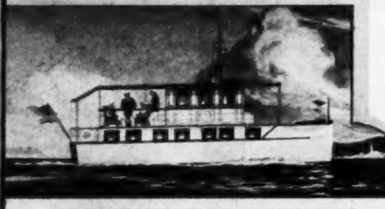


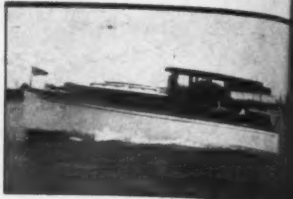

WHEELER "PLAYMATE" CRUISER

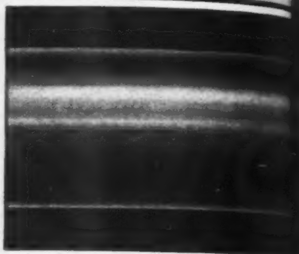
AUTO-HYDRO-CRAFT RUNABOUT


DUNPHY RUNABOUT

DEBASCO 18' RUNABOUT


BOSSERT POWER HOUSEBOAT


RICHARDSON CRUISER



BANFIELD 22' SEA-SKIFF

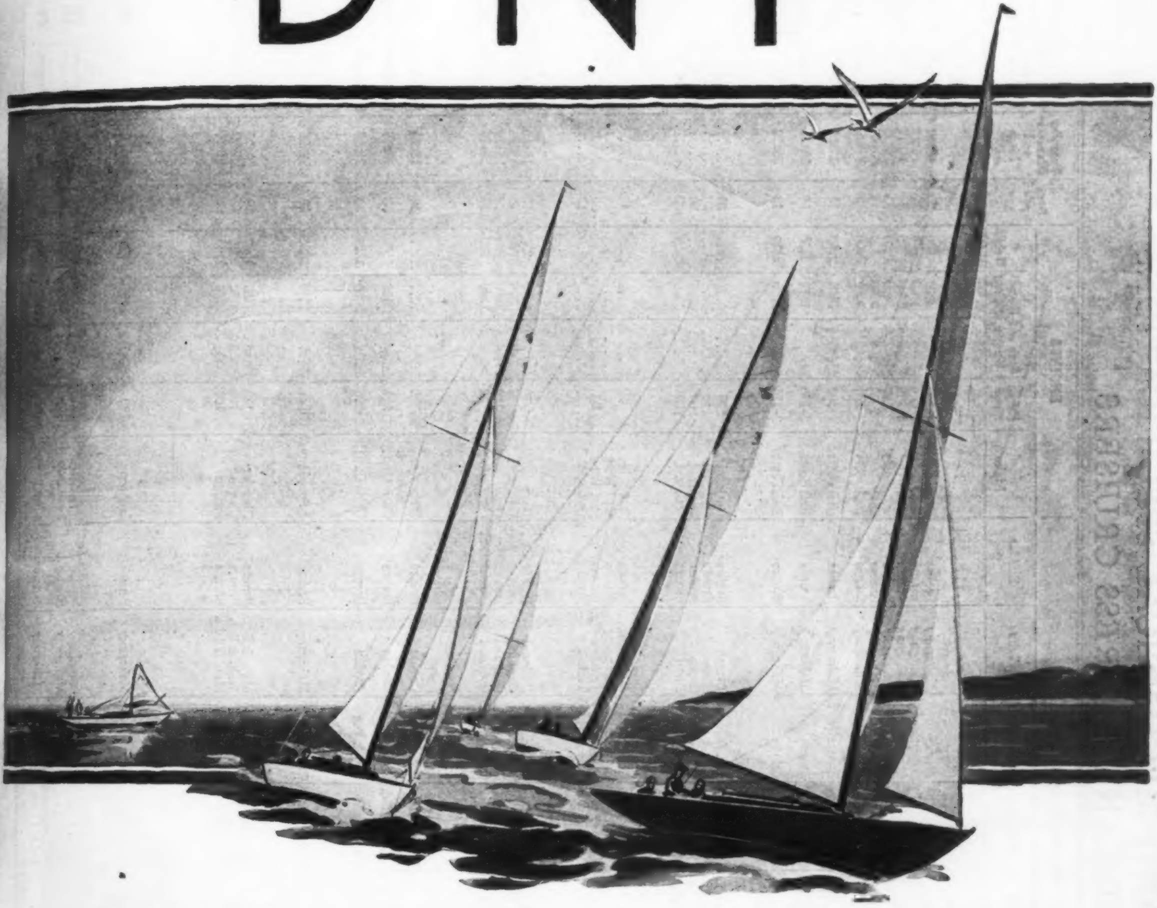
ROBINSON SEDAN RUNABOUT

ATLAS 23' RUNABOUT

CAPE COD 16' RUNABOUT

MILLARD, BREWSTER & CHAMBERS D

"D·N·F"



"Did Not Finish"—or "Did Not Fail"—which will be your yacht's record for next season?

You may have the fastest yacht and you may be the ablest skipper in the fleet—but if the *hardware* melts like butter, in a pinch—all goes for naught.

No use taking chances—whether racing, cruising, or "runabouting." Equip her with Laughlin fittings—bronze or galvanized—and free your mind from worry and your life and friends' lives from real peril.

Laughlin marine hardware has been withstanding extreme tests on commercial, fishing and pleasure craft for over sixty years. Its reliability has been proven again and again. Use it and forget equipment troubles. The triang-L trade-mark identifies the genuine, made by the original manufacturers of motor boat and yacht hardware.

The THOMAS LAUGHLIN Co.

Marine Hardware - *Drop Forgings* - *Wire Rope Fittings*

144 FORE STREET

Portland Maine U.S.A.

NEW YORK - CHICAGO - NEW ORLEANS - SEATTLE - SAN FRANCISCO - LOS ANGELES

STRUCTURAL AND MECHANICAL SPECIFICATIONS
CRUISERS AND EXPRESS CRUISERS

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
A. C. F. **New York, N. Y.**																							
30 Cruiser Runab't	1	2	1	1	1	Smooth	⅞x1¼ 8¼	2¾ Pine	¾ Pine	Bronze	Mahogany	Bronze	Gray	100	3⅜x4½	2400	900	22	16x12	1⅛ Tobin	80	40	....
30 Cruiser........	2	6	1	1	1	Smooth	1⅜x1⅜ 11	Pine	⅞ Pine	Galvanized	Mahogany	Bronze	Gray	40	3¼x3¾	1500	800	10	16x12	1¼ Tobin	50	30	....
38 Sport Cruiser...	1	4	1	1	1	Smooth	⅞x1¼ 8	3¾ Pine	¾ Pine	Bronze	Mahogany	Bronze	Gray	2–100	3⅜x4½	2400	900	26	17x12	1⅛ Tobin	150	45	....
40 Cruiser........	2	6	1	2 to 3	3	Smooth	1½x1½ 11	5 Pine	1 Pine	Bronze	Mahogany	Bronze	Hall Scott	100	4¼x5½	1800	2200	15	24x26	1½ Tobin	220	80	....
46 Cruiser........	2	7	1	3	3	Smooth	1¼x1½ 9	5 Pine	1 Pine	Bronze	Mahogany	Bronze	Gray	2–90	3⅞x5	2200	850	18	18x12	1¼ Tobin	225	100	....
47 Cruiser........	2	7	1	2	2	Smooth	1⅞x2 10	5½ Oak	1⅛ Pine	Bronze	Mahogany	Bronze	Hall Scott	100	4¼x5½	1800	2200	13	30x32	1¾ Tobin	220	150	....
54 Twin Screw Motor Yacht	2	8	1	2	3	Smooth	1½x1½ 11	Oak	1⅛ Pine	Bronze	Mahogany	Bronze	Hall Scott	2–100	4¼x5½	1800	2200	15	30x30	1⅞ Tobin	450	275	....
54 Twin Screw Motor Yacht	3	8	1	2	3	Smooth	1½x1½ 11	Oak	1⅝ Pine	Bronze	Mahogany	Bronze	Hall Scott	2–175	5x7	1800	2820	19	30x28	1⅞ Tobin	450	275	1500-Watt Stern's
68 Twin Screw Motor Yacht	3	....	1	3	3	Smooth	2x2 11½	Oak	1⅝ Pine	Bronze	Mahogany	Bronze	Hall Scott	2–175	5x7	1800	2820	18	30x28	2 Tobin	750	300	2½-KW. Universal
BANFIELD **Atlantic Highl'ds, N.J.**																							
32 Std. Sgle. Cabin	1	4	1	1	1	Lap	⅞x1¾ 6	2 Spruce-Flat	¾ Mah.	Cpr. & Brs.	Brass	Bronze	Optional	200	....	......	......	30	....	1⅜ Monel	100	30	....
32 Std. Dble. Cabin	2	6	1	1	1	Lap	⅞x1¾ 6	2 Spruce-Flat	¾ Mah.	Cpr. & Brs.	Brass	Bronze	Optional	130	....	......	......	22	....	1¼ Monel	100	30	....
32 De Luxe Sg. Cab.	1	4	1	1	1	Lap	⅞x1¾ 6	2 Spruce-Flat	¾ Mah.	Cpr. & Brs.	Brass	Bronze	Optional	200	....	......	......	30	....	1⅜ Monel	100	30	....
32 De Luxe Db. Cab.	2	6	1	1	1	Lap	⅞x1¾ 6	2 Spruce-Flat	¾ Mah.	Cpr. & Brs.	Brass	Bronze	Optional	130	....	......	......	22	....	1¼ Monel	100	30	....
BLANCHARD **Seattle, Wash.**																							
26..............	....	2	1	1	1	Smooth	Oak 8	Fir	Cedar	Galvanized	Mahogany	Bronze	Red Wing	50	....	......	......	14	....	1⅛ Bronze	50	30	....
32..............	....	4	1	1	1	Smooth	Oak 9	Fir	Cedar	Galvanized	Mahogany	Bronze	Red Wing	80	....	......	......	12	....	1¼ Bronze	100	60	....
36..............	1	6	1	1	1	Smooth	Oak 9	Fir	Cedar	Galvanized	Teak	Bronze	Red Wing	80	....	......	......	13	....	1¼ Bronze	180	60	....
45..............	1	7	1	1	1	Smooth	Oak 9	Fir	Cedar	Galvanized	Teak	Bronze	Optional	......	....	......	......	13	....	1⅝ Bronze	200	250	Yes
BROOKS **Saginaw W. Side, Mch.**																							
***291**..............	1	2	1	1	1	Smooth	1⅛ Oak 36	2¾ Oak	⅞ Cypress	Galv. or Brs.	Optional	Iron or Brs.	Gray	50	4x5	1800	850	12	19x16	1⅜ St. or Bs.	Opt.	Opt.	....
***292**..............	1	2	1	1	1	Smooth	1⅛ Oak 36	2¾ Oak	⅞ Cypress	Galv. or Brs.	Optional	Iron or Brs.	Universal	75	3½x4½	3000	790	13	18x24	1⅜ St. or Bs.	Opt.	Opt.	....
***293**..............	2	4	1	1	1	Smooth	1¼ Oak 36	3¾ Oak	⅞ Cypress	Galv. or Brs.	Optional	Iron or Brs.	Gray	110	3⅜x4½	2400	900	14½	24x20	1⅜ St. or Bs.	Opt.	Opt.	....
***242**..............	1	2	1	1	1	Smooth	1⅛x1⅛ Oak 7¾	2¾ Oak	⅞ Cypress	Galv. or Brs.	Optional	Iron or Brs.	Gray	50	4x5	1800	850	13	19x16	1⅜ St. or Bs.	Opt.	Opt.	....
	*All models supplied knock-down.																						
CHRIS-CRAFT **Algonac, Mich.**																							
121 Custom Commuter	1	1	1	1	1	Dble Bot. Sm. Batten Sides	1⅛x3½ 12 ⅞x1⅛ 6	2½x5	⅝ Bot., ⅝ Sides	Brs. & Bze.	Crodon	Bronze	Scripps or Kermath	2–200	5x5¾	......	......	40	18x24	1¼ Monel	152	....	Delco 12-V.
122 Commuting Cruiser	1	4	1	1	1	Dble Bot. Sm. Batten Sides	1⅛x3½ 12 & 24 ⅞x1⅛ 6	5	1⅛ Bot., ⅝ Side	Brs. & Bze.	Crodon	Bronze	Chris Craft	225	5x5¼	2000	1500	30	20x18	1⅜ Monel	180	40	Delco 12-V.
123 Chris-Craft Yacht	2	6	1	2	2	Dble Bot. Sm. Batten Sides	1⅛x3½ 12 & 24 1x1¼ 6	5x6	⅞ Bot., ¾ Side	Brs. & Bze	Crodon	Bronze	Chris Craft	2–225	5x5¼	2000	1500	30	21x19	1⅜ Monel	340	76	Delco 12-V.
CONSOLIDATED **Morris Hgts, N. Y. Cy**																							
55 Cruiser........	2	6	1	3	3	Double	10	Oak	Mah. & Ced.	Copper	Mahogany	Bronze	2 Speedways	170 ea.	5¾x7	1200	2025	20	26x22	Bronze	400	150	Yes
CORSAIR **Detroit, Mich.**																							
Cruisader 30......	1	2	1	1	1	Smooth	1⅜x1⅜ 11⅛	2⅞ Oak	Mahogany	Bronze	Mah. & Brs.	Bronze	Chrysler	120	3⅝x5	2750	1000	18	20x20	....	120	30	....
Cruisader 30A.....	1	4	1	1	1	Smooth	1⅜x1⅜ 11⅛	2⅞ Oak	Mahogany	Bronze	Mah. & Brs.	Bronze	Chrysler	120	3⅝x5	2750	1000	18	20x20	....	120	30	....
Cruisader 36......	1	4	1	1	1	Smooth	1½x1½ 9¼	Oak	Mahogany	Bronze	Mah. & Chr.	Bronze	Scripps	200	5x5¾	2200	1135	24	18x14	....	120	50	....
DACHEL CARTER **Benton Harb., Mich.**																							
DAUNTLESS **Millard Bewster & Chambers New York**	3	6	1	3	3	Smooth	1⅓ 1¼ Oak 10	3¾x6 Oak	1¼ Indoako	Bronze	Mahogany	Bronze	Lathrop	100	5¼x6¼	1000	2500	13¼	24x24	1¾ Bronze	200	75	32-Volt Homelite
DAWN **Clason Point, N. Y.**																							
45 Cruiser........	3	7	1	3	3	Smooth	1⅝x1⅞ Oak 11	4¼ Oak	1¼ & 1 Ced.	Copper	Mahogany	Bronze	2 Lathrop	70 ea.	4⅝x5½	1300	1700ea	15	22x14	1½ Bronze	270	110	None
48 De Luxe.......	3	8	1	3	3	Smooth	1⅝x1⅞ Oak 11	4¼ Oak	1¼ & 1 Ced.	Copper	Mahogany	Bronze	2 Lathrop	70 ea.	4⅝x5½	1300	1700ea	15	22x14	1¾ Bronze	270	110	600-Watt Homelite
48 Express........	3	8	1	3	3	Smooth	1⅝x1⅞ Oak 11	4¼ Oak	1⅜ & 1 Ced.	Copper	Mahogany	Bronze	2 Sterling	200 ea.	5¼x6	1600	1800ea	20	23x16	1¾ Bronze	270	110	600-Watt Homelite

(*Continued on page 322*)

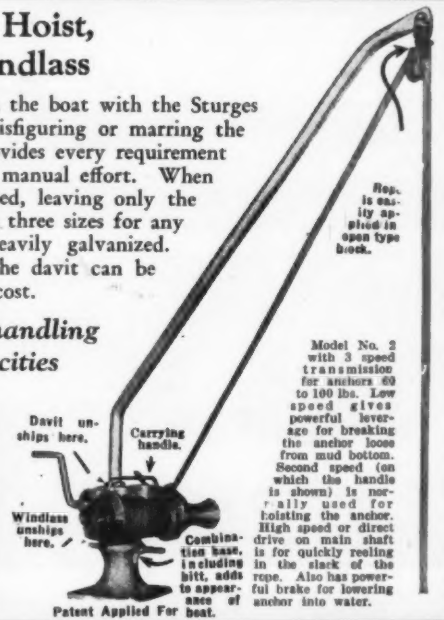
Sturges Efficient Boating Aids

STURGES ANCHOR HOIST
STURGES JIFFY MOORING SNAP
STURGES DINGHY LINE CONTROL

Combination Anchor Hoist, Dinghy Davit and Windlass

YOU can make anchor raising the easiest job on the boat with the Sturges Anchor Hoist. It is easily installed without disfiguring or marring the cruiser in any way. The Sturges Anchor Hoist provides every requirement for lowering and raising the anchor with minimum manual effort. When not in use, the davit and the hoist can be unshipped, leaving only the base on deck. The Sturges Anchor Hoist is made in three sizes for any type of anchor up to 100 lbs. Sturdily built, heavily galvanized. Furnished entirely in brass at slight extra cost. The davit can be designed especially to fit your boat without extra cost.

We also manufacture a special hoist for handling outboard motors. Three sizes—capacities 200, 300 and 400 lbs.


Rope is easily applied in open type block.
Davit unships here.
Carrying handle.
Windlass unships here.
Combination base, including bitt, adds to appearance of boat.
Patent Applied For

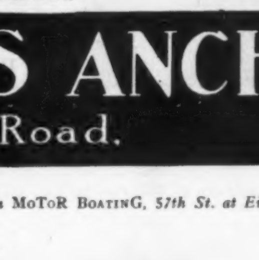
Model No. 2 with 3 speed transmission for anchors 60 to 100 lbs. Low speed gives powerful leverage for breaking the anchor loose from mud bottom. Second speed (on which the handle is shown) is normally used for hoisting the anchor. High speed or direct drive on main shaft is for quickly reeling in the slack of the rope. Also has powerful brake for lowering anchor into water.

Mooring Is Now a One-Handed Job

with the

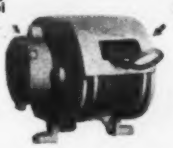
Sturges Jiffy Mooring Snap

ILLUSTRATION shows the Sturges Jiffy Mooring Snap attached to opposite end of boat hook pole. There is a rope attached to the snap, running parallel with the pole which you hold in picking up mooring. To moor your boat simply hook the Sturges Jiffy Mooring Snap on mooring loop or ring, give the pole a jerk which releases it from the snap and the job is done. The free end of the rope is then fastened to the bitt. You can moor your boat without leaving the wheel by putting the line over bitt and bringing it back along the deck, pick up the mooring, jerk the pole to release the snap and let the boat come around on temporary mooring.



Sturges Dinghy Line Control

Takes Up Tow Line Slack



THIS device takes in slack on dinghy line preventing it from becoming tangled in the wheel, rudder or propeller shaft while boat is moored or going astern.

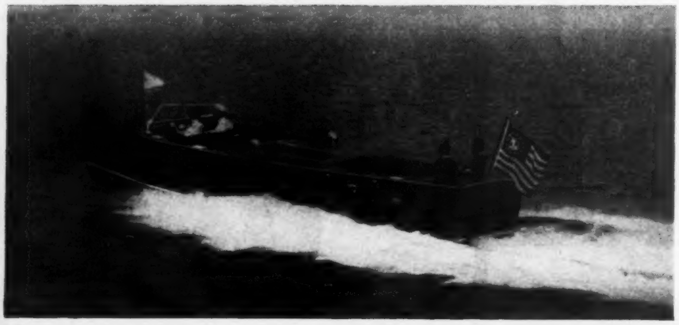
Write today for literature and prices or see these products at our exhibit on third floor, Booth 35, Motor Boat Show, Grand Central Palace, January 17 to 25th.

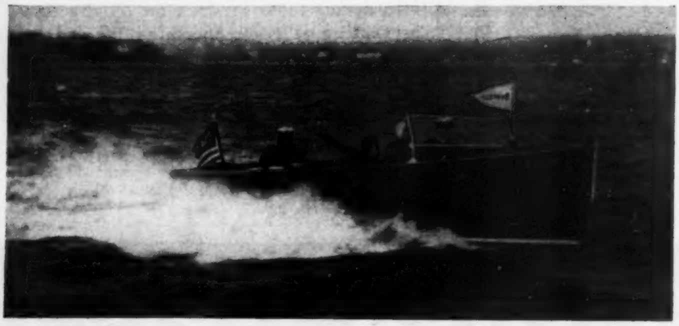
STURGES ANCHOR HOIST

3 Kensington Road. Bronxville, N. Y.

The *Banfield* Sea Skiff

COMFORTABLE, SEAWORTHY, SPEEDY
THE ULTIMATE IN PLEASURE CRAFT





BANFIELD "32" SEDAN RUNABOUT

Motor	H.P.	Speed m.p.h.	Price
Kermath	*200*	*33-35*	$7100
Scripps	*200*	*33-35*	7100
Sterling	*200*	*33-35*	7100

Length 32′ Beam 8′ 6″

BANFIELD "32" RUNABOUT

Motor	H.P.	Speed m.p.h.	Price
Kermath	*200*	*33-35*	$6500
Scripps	*200*	*33-35*	6500
Sterling	*200*	*33-35*	6500

Length 32′ Beam 8′ 6″

BANFIELD "26" SEDAN RUNABOUT

Motor	H.P.	Speed m.p.h.	Price
Chrysler	*106*	*22-25*	$4850
Gray	*129*	*25-28*	4850
Kermath	*200*	*35-38*	6100
Scripps	*200*	*35-38*	6100
Sterling	*200*	*35-38*	6200

Length 26′ Beam 7′ 6″

BANFIELD "26" RUNABOUT

Motor	H.P.	Speed m.p.h.	Price
Chrysler	*106*	*22-25*	$4250
Gray	*129*	*25-28*	4250
Kermath	*200*	*35-38*	5500
Scripps	*200*	*35-38*	5500
Sterling	*200*	*35-38*	5600

Length 26′ Beam 7′ 6″

BANFIELD "22" RUNABOUT

Motor	H.P.	Speed m.p.h.	Price
Gray	*72*	*22-25*	$2750
Chrysler	*106*	*25-28*	3050
Gray	*129*	*27-30*	3050

Length 22′ Beam 6′ 6″

All Prices Afloat Atlantic Highlands, N.J.

DEALERS! Only a few more territories open. Write for our proposition.

Runabouts and Cruisers

HERE is a line of sea-going boats, from which you can choose "just the boat" you want. The runabouts have the same seaworthy, safe, sturdy characteristics that have made Banfield cruisers famous the world over.

Only the best of materials are used in the construction of these boats—the runabouts as well as the cruisers—and the workmanship is the finest obtainable. Lap strake mahogany planking; copper and brass fastenings; ribs of steam-bent white oak; heavy spruce bottoms; with a yellow pine skeg running the full length of the boat protecting it against sunken logs and other obstacles—qualities that make these Sea Skiffs the ultimate in pleasure craft.

The runabouts are roomy, comfortable, *seaworthy* and easy to operate. The Single Cabin Cruisers have sleeping accommodations for four people, the Double Cabin Cruisers for six.

For more complete information and specifications write or call at the New York Showroom, 254 Fourth Avenue.

BANFIELD "32" DE LUXE CRUISER

Single Cabin

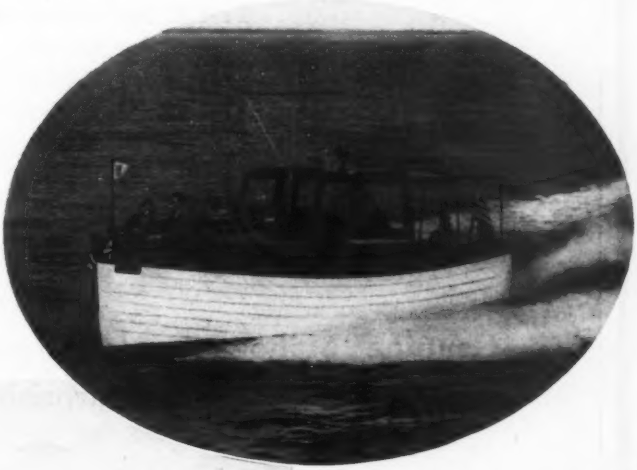
Motor	H.P.	Speed m.p.h.	Price
Chrysler	*106*	*18-20*	$6950
Gray	*129*	*20-22*	6950
Sterling	*200*	*28-30*	7950
Scripps	*200*	*28-30*	7950
Kermath	*200*	*28-30*	7950

Length 32′ Beam 8′ 6″

Double Cabin

Motor	H.P.	Speed m.p.h.	Price
Chrysler	*106*	*18-20*	$7450
Gray	*129*	*20-22*	7450

Length 32′ Beam 8′ 6″



The Banfield "32" Double Cabin Cruiser (shown above) and a Banfield Single Cabin (in oval).

BANFIELD "32" STANDARD CRUISER

ingle Cabin

Chrysler	*106 h.p.*	$6250
speed 18-20	*m.p.h.*	
Gray	*129 h.p.*	6250
speed 20-22	*m.p.h.*	
Sterling	*200 h.p.*	7250
speed 28-30	*m.p.h.*	
Scripps	*200 h.p.*	7250
speed 28-30	*m.p.h.*	
Kermath	*200 h.p.*	7250
speed 28-30	*m.p.h.*	

Length 32′ Beam 8′ 6″

Double Cabin

Chrysler	*106 h.p.*	$6750
speed 18-20	*m.p.h.*	
Gray	*129 h.p.*	6750
speed 20-22	*m.p.h.*	

Length 32′ Beam 8′ 6″

BANFIELD SEA SKIFF WORKS INC.

Sales Offices and Permanent Exhibit
254 Fourth Avenue, New York City

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ATLANTIC HIGHLANDS, NEW JERSEY

LARGEST BUILDERS OF
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Test it for Absorption
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◆

Genuine Mahogany meets every boat test supremely!
And can be secured at surprisingly little increase in cost

◆

Note the increasing number of better
boats, whose manufacturers boldly announce

"Constructed of Genuine Mahogany"

◆

THE MENGEL COMPANY is equipped to promptly supply
Genuine Mahogany Lumber

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Of any required moisture content
In any thickness
And in any quantities

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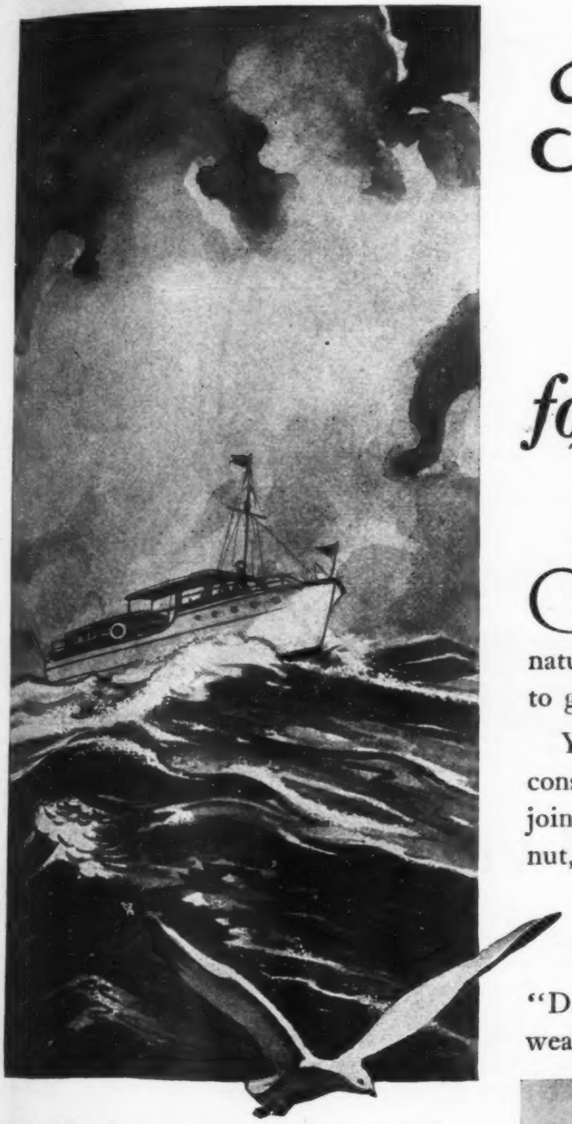
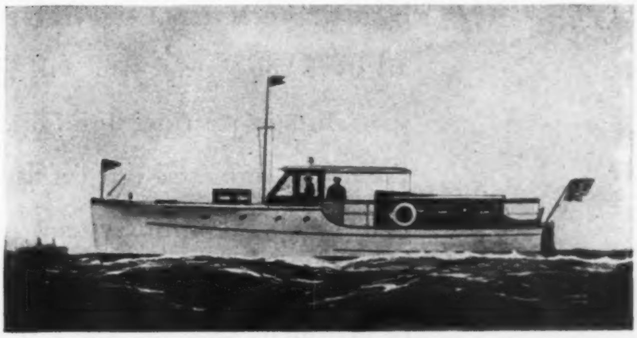


Never Too Rough *for the "Dauntless"*

STORMS are unpleasant subjects. We'd rather not mention them, but we think we should... For you'll want this beautiful, custom-built yacht when you see her, and naturally you'll be glad to know that she is built to go to sea and stay there!

You can see this for yourself by examining the construction. Note the extra heavy planking, the joiner work of African mahogany and old walnut, the triple fire prevention system and the infinite attention to every detail.

And see how compact and comfortable she is. There is nothing to be desired on the "Dauntless", in rough seas or smooth. She will weather years of hard and constant service.



All of the finest devices known to modern naval construction have been used on the "Dauntless". There is hot and cold water, throughout the ship. She is superbly fitted out to the last detail, including linen and silver. Her hull and engine beds are designed for either Diesel or gasoline power. Surprisingly reasonable. Don't miss seeing the "Dauntless" at the Motor Boat Show.

For further details apply to

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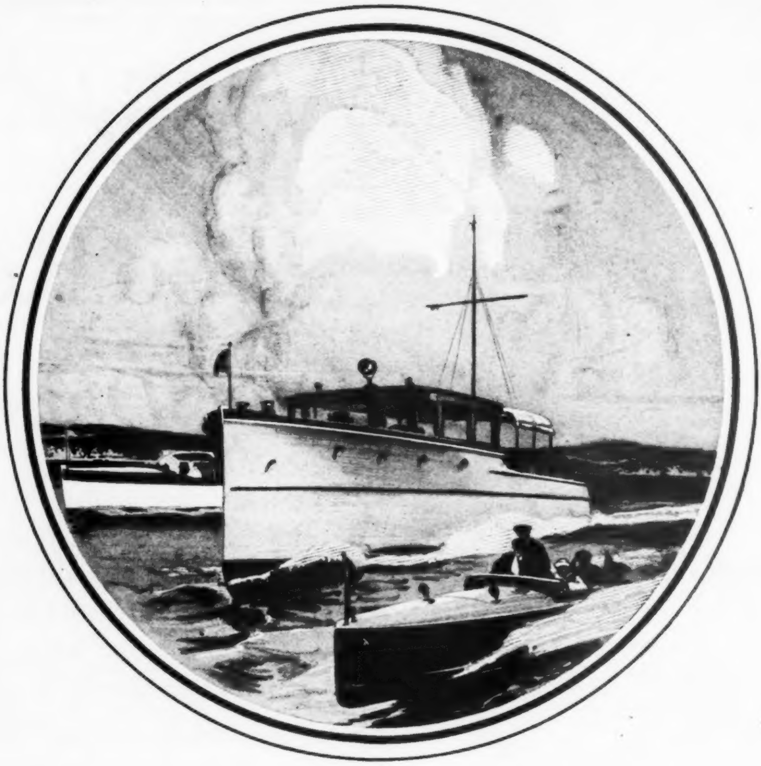

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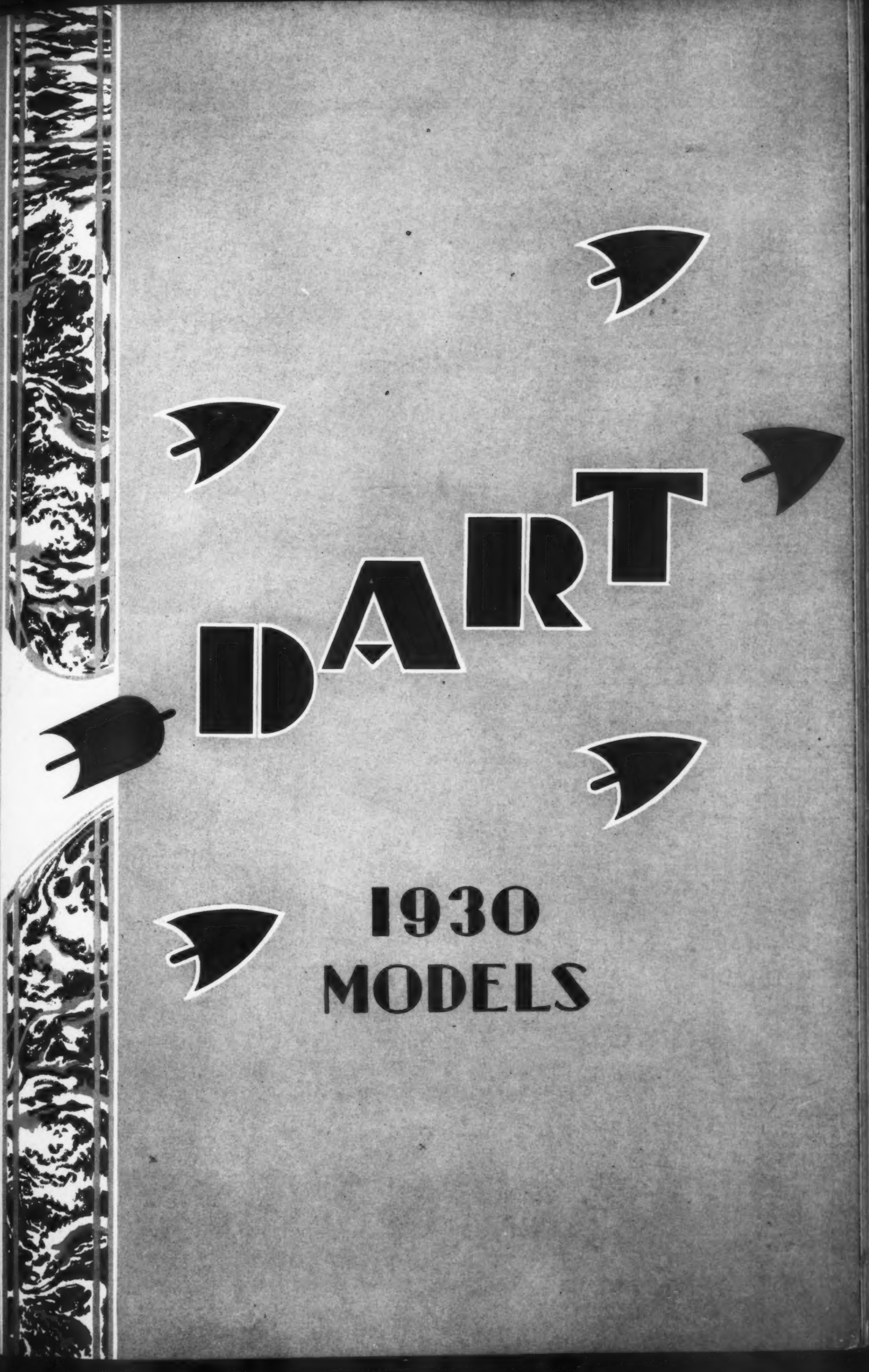
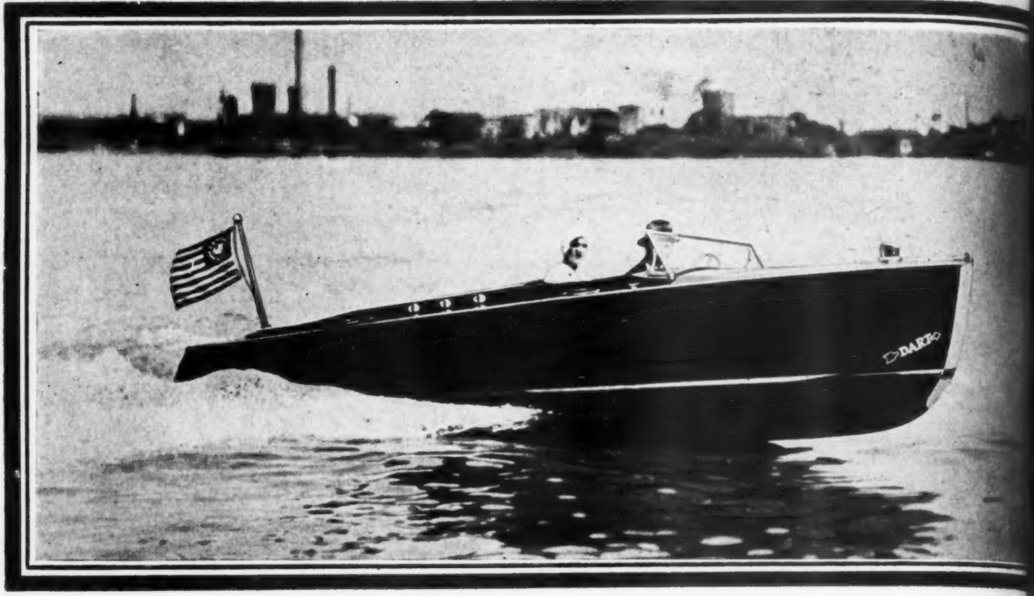
Starting, Lighting & Ignition



DART

1930 MODELS

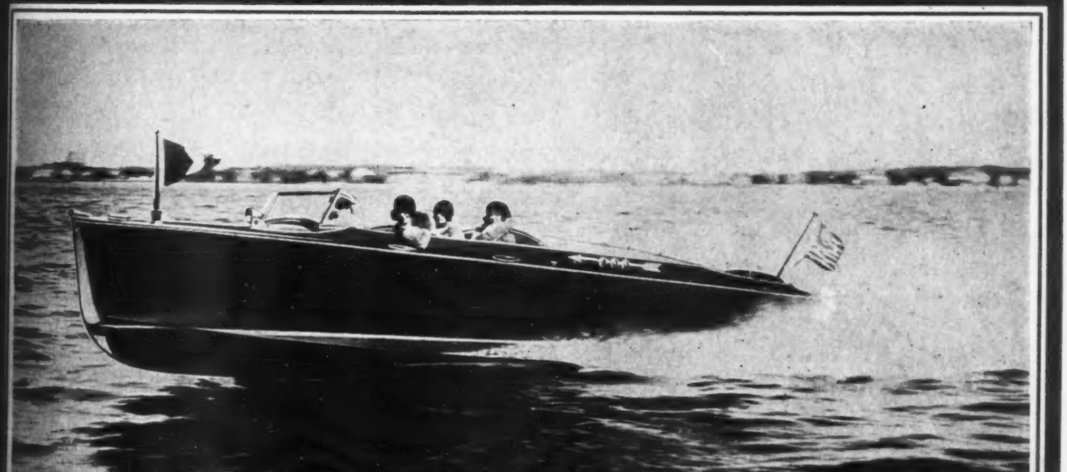


The Dart 18½ foot Runabout is the pioneer of its class—proven here and abr in actual service. This craft has the same graceful lines, beautiful natural fin and unexcelled construction as her sister models. Seats six comfortably. G anywhere—everywhere. And makes 32 miles per hour and better. Powered Chrysler six cylinder Crown Motor. Priced completely equipped $1595.00 F.O Toledo.

This year the 22½ foot Red Dart is identical in appearance and construction the 26 foot model. Powered with the Chrysler improved Imperial motor she make 37 miles per hour—more if you care to race. For beauty, seaworthiness smooth performance, no boat of her size can equal the Red Dart. A fifty cruise is the most convincing proof of her ability. $2695 F.O.B. Toledo.

DART BOATS INC., TOLEDO, O

The Silver Dart is the Queen of the Dart squadron—outstanding in any company 26 feet of shimmering grace and sleek beauty. Fast, luxurious, seagoing—a craft that any boat lover will be proud to command. The Silver Dart is powered with a "200" Kermath engine. She makes 45 miles per hour and is at her best in "dusty" weather. $4,400 F.O.B. Toledo.



he 30 foot Golden Dart is the ultimate achievement of the boat building craft. ts handsome appearance and equipment can only be compared with the most expensive custom built boats. Its performance suggests the smooth, effortless motion f a fast plane. Truly the King of speed boats. Powered at owner's discretion with Sterling Petrel, Wright, Hispano or Liberty motors. Speed from 40 to 56 miles. Price $7,000 and up.

DART BOATS INC., TOLEDO, OHIO

"More Speed Per Horse Power"

AS you watch a Dart Boat slip from her moorings and glide away at racing speed, you cannot but thrill at her sleek beauty. And this very beauty is the secret of Dart speed. The perfection of her balance, the flow of her strakes, the grace of her prow and bottom—are designed to allow the entrance and frictionless passage that give Dart Boats additional speed per horse power.

Dart Boats are at their best too in bad weather as owners everywhere attest. They will buck a headsea with a minimum of pounding and ride following waves without yawing or broaching.

Choose your Dart now and enjoy the happiest summer you have ever experienced. Every boat is thoroughly tested and inspected before delivery with the careful attention to gear and equipment which the novice appreciates and the seafaring man expects.

Write at once for complete information about the model which you prefer.

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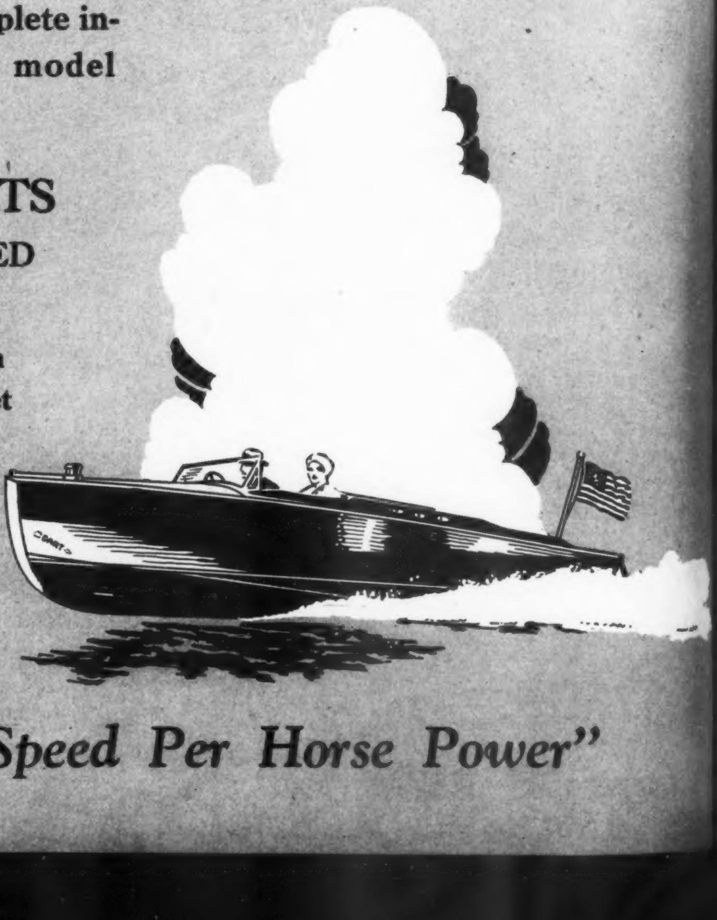
TOLEDO, OHIO

New York Branch
17 East 42nd Street



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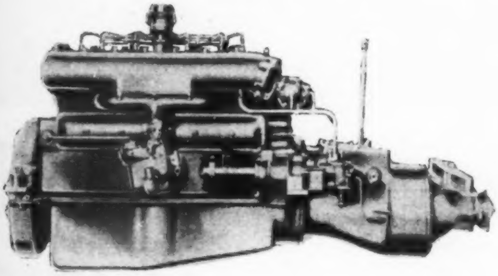
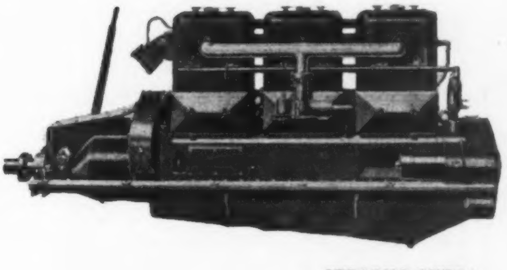
LOCKWOOD OUTBOARD MOTORS
LYMAN OUTBOARD BOATS
DUPLEX MARINE OIL and KASSON LUB. COMPOUND
DODGE RUNABOUTS

CORSAIR CRUISER

DODGE RUNABOUT



CHRYSLER MARINE ENGINE



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LYMAN SEA SKIFF

LOCKWOOD MOTOR

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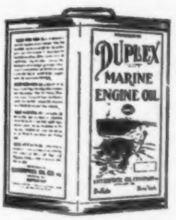
NEW ENGLAND
CALL ON US**



DUPLEX MARINE OIL

STRUCTURAL AND MECHANICAL SPECIFICATIONS OF CRUISERS AND EXPRESS CRUISERS

(Continued from page 310)

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
DODGE New York, N. Y.																							
45 Express	1	8	1	2	2	Batten	1-1½x3½ Oak 18	Fir	¾ Mah. Sides 1 Dble Bot.	Bze. & Brs.	Mah. & Nickel Silver	Bronze	2 Lycoming	300 ea.	4⅝x5	2400	......	35	22x20	1⅜ Monel	250	Yes	Yes
DYER MOT'CRAFT E. Greenwich, R. I.																							
38 Speed Sedan	......	4 Pull-man	1	1	1	Smooth	Mahogany	Oak	Dble Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional	200	......	......	......	30	......	Monel	150	20	......
38 Speed Sedan (Twin Screw)	......	4 Pull-man	1	1	1	Smooth	Mahogany	Oak	Dble. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional	400	......	......	......	41	......	Monel	225	20	......
38 Exp. Commuter (Twin Screw)	......	6	1	2	2	Smooth	Mahogany	Oak	Dble Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional	400	......	......	......	27–30	......	Monel	250	50	......
42 Exp. Commuter (Twin Screw)	......	8	1	2	2	Smooth	Mahogany	Oak	Dble Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional	400	......	......	......	27–30	......	Monel	250	50	......
ELCO Bayonne, N. J.																							
Twenty-Six	1	4	1	1	1	Smooth	1¼x1¼x12	2¾ Oak	⅞ Cedar	Bronze	Mahogany	Mah. Outb'd	Elco-Gray	45	3⅜x4	1800	......	11	......	1⅛ Bronze	50	50	......
Voodette	1	4	1	1	1	Smooth	⅞x⅞x10	2¾ Oak	¾ Cedar	Bronze	Mahogany	Bze. Outb'd	Elco-Buda	10	4⅛x5¼	1800	......	20	......	1¼ Bronze	75	45	......
Cruisette	2	6	1	1	1	Smooth	1⅜x1⅜x12	3 Oak	⅞ Cedar	Bronze	Mahogany	Bze. Outb'd	Elco-Buda	125	4¾x6	1800	......	16	......	1½ Bronze	120	60	......
Thirty-Eight	3	7	1	2	2	Smooth	1⅜x1⅜x12	3⅛ Oak	⅞ Cedar	Bronze	Mahogany	Bze. Inb'd	Elco F-62	145	5x6	1600	......	15	......	1½ Bronze	145	90	......
Forty-Two	4	7	1	2	2	Smooth	1½x1½x12	3¾ Oak	1⅛ Cedar	Copper	Mahogany	Bze. Inb'd	Elco F-62	145	5x6	1600	......	13	......	1½ Bronze	200	150	......
Fifty	4	9	1	2	2	Smooth	1⅝x1⅝x12	4 Oak	1⅛ Cedar	Copper	Mahogany	Bze. Inb'd	Elco F-62	145 ea.	5x6	1600	......	15	......	1½ Bronze	350	220	Yes
FAIRFORM Jacksonville, Fla.																							
45 Cruiser	1	7	1	2	2	Smooth	Oak	Oak	Mahogany	Bronze	Mahogany	Bronze	2 Kermath	200 ea.	......	1650	......	25	Columb'n	Everdur	250	140	U.S.Motors
54 Cruiser	1	9	1	3	3	Smooth	Oak	Oak	Mahogany	Bronze	Mahogany	Bronze	2 Sterling	290 ea.	......	1600	......	30	Columb'n	Everdur	400	140	U.S.Motors
GRANDY Seattle, Wash.																							
28	......	4	......	......	......	......	1⅛x1⅜ Oak	......	⅞ Cedar	......	......	......	Gray	60	......	......	......	8	......	......	......	......	......
30	......	6	......	......	......	......	1⅛x1⅜ Oak	......	⅞ Cedar	......	......	......	Gray	72	......	......	......	11	......	......	......	......	......
36	......	6	......	......	......	......	1⅛x1⅜ Oak	......	1 Cedar	......	......	......	Gray	90	......	......	......	13	......	......	......	......	......
40	......	7	......	......	......	......	1½x1¾ Oak	......	1⅛ Cedar	......	......	......	Hall Scott	100	......	......	......	16	......	......	......	......	......
GREENPORT Greenport, N. Y.																							
40 De Luxe	2	6	1	2	2	Smooth	Oak 10	4 Oak	1 Cedar	Copper	Mahogany	Bronze	Buda	115	4½x6	1250	1800	12	21x16	1½ Bronze	170	75	12-V. Homelite
40 Standard	2	6	1	2	2	Smooth	Oak 10	4 Oak	1 Cedar	Copper	Mahogany	Bronze	Buda	115	4½x6	1250	1800	12	21x16	1½ Bronze	170	75	......
HACKER CRAFT Mt. Clemens, Mich,																							
HOLL-CRAFT Boston Mass.																							
56 Steel Cruiser	5	8	1	3	3	Steel	Steel angles	Steel	1½ Teak	Bronze	Teak	¼ Steel	Diesel	2-70	4¾x7½	900	3100	16	Bronze	2⅝ Steel	800	500	32-Volt Kohler
HUMPHREYS SEA CRUISER New York, N. Y.																							
40 Pilot	2	4	1	2	2	Smooth	1⅜x1⅝ 7	3½ Oak	1 Cedar	Copper	Mahogany	Bronze	Optional	65	......	1000	......	12	......	1½ Bronze	300	80	32-V. with motor
46 Navigator	2	6	1	3	3	Smooth	1⅜x1⅝ 7	4 Oak	1⅛ Cedar	Copper	Mahogany	Bronze	Optional	100	......	1000	......	13	......	1¾ Bronze	300	100	32-V. with motor
50 Challenger	3	7	1	3	3	Smooth	1½x1¾ 8	4½ Oak	1¼ Cedar	Copper	Walnut or Mahogany	Bronze	Optional	100	......	1000	......	13–14	......	1¾ Bronze	450	150	32-V. Falcon
55 Privateer	4	7	1	3	3	Smooth	1½x1⅞ 8	5 Oak	¾ Cedar & ¾ Mah.	Copper	Walnut or Mahogany	Bronze	1 or 2 Treiber	2–100	......	1000	......	15	......	1¾ Bronze	600	200	32-V. Falcon
60 Explorer	4	8	1	3	3	Smooth	1½x1⅞ 8	5½ Oak	¾ Cedar & ¾ Mah.	Cpr. & Bze.	Walnut or Mahogany	Bronze	Optional	180	......	750	......	14	......	1⅞ Bronze	600	200	110-V. Bolinder
65 Destroyer	4	8	1	3	3	Smooth	1¾x2 9	6½ Oak	1⅝ Cedar	Cpr. & Bze.	Walnut or Mahogany	Bronze	Optional	2–150	......	1000	......	17	......	2 Bronze	600	250	110-V. Bolinder
70 Discoverer	2 Dble 2 Sgle	8	1	3–4	3–4	Smooth	1⅞x2⅛ 10	7 Oak	⅞ Mah. & 1 Cedar	Cpr. & Bze.	Walnut or Mahogany	Bronze	2 Optional	2–200	......	750	......	14	......	2⅛ Bronze	......	......	110-V. Bolinder
75 Commander	2 Dble 2 Sgle	9	1	3–4	3–4	Smooth	2x2½ 12	7½ Oak	2 Cedar or Pine	Cpr. & Bze.	Walnut or Mahogany	Bronze	2 Optional	2–200	......	750	......	16	......	2⅛ Bronze	1500	1000	110-V. Treiber

(Continued on page 334)

Are You Wasting Power Through Frictional Losses?

The Single Joint

Frictional losses of power due to unnecessary binding caused by drive shaft disalignment may be robbing you of speed and fuel economy.

You can correct the condition permanently by using Blood Brothers Universal Joints, and will profit immediately by increasing effective horse power, decreasing fuel consumption and reducing upkeep cost.

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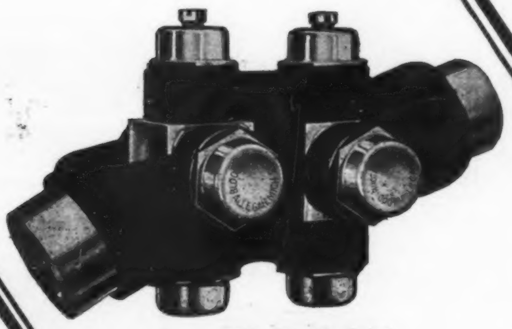
Reduce Friction—Increase H.P. and Speed and Reduce Fuel Cost

Blood Brothers Universal Joints, made in both double and single types, are more widely used than any other marine joint. They may be operated at unusual steep angles and will compensate for any angularity or disalignment of drive shaft. Sturdily constructed, they are capable of transmitting up to 250 H.P. at 1000 R.P.M.

May we send you our Marine Bulletin?



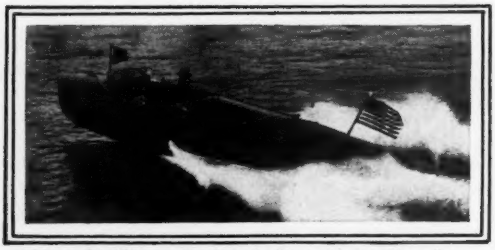
The Double Joint

BLOOD-BROTHERS MACHINE COMPANY
PIONEER MAKERS OF UNIVERSAL JOINTS
ALLEGAN, MICHIGAN

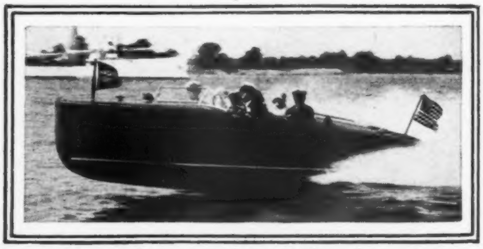
HACKERCRAFT

are Supreme in their Handwrought Beauty and Skilful Design

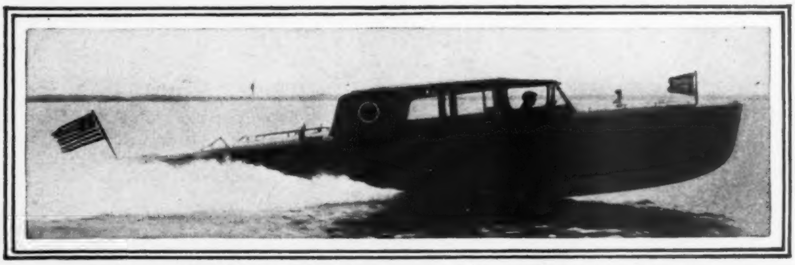
The 30 foot Hackercraft is an "achievement" . . . 40 to 42 m.p.h. . . . eleven passenger accomodations . . . complete de luxe travel afloat. $5500 at factory.



24 feet of brilliant action is tucked into this 35 mile an hour nine passenger all mahogany Hackercraft—$3150 at factory.



The world's most famous runabout—26 feet of compact, rugged hull with 44 miles an hour at your command. $4475 at factory.



The new 38 foot Hackercraft cruiser-commuter has complete cruising quarters for four — a speed of 42.13 miles an hour with twin Kermath "200"s.

All Hackercraft may be equipped with either a one man or sedan top of special Hacker design at extra cost.

For Speed and Grace...
For Staunchness—too—
Hackercraft has but one Counterpart
Another Hackercraft

SYMMETRY—flashing from every trimly turned line, from every hull contour and fitting — today stamps Hacker boats with an inimitable air of grace and character. Thirty-six years of designing effort — thirty-six years of ripened experience have conceived the 1930 Hackercraft series and dedicated it to the boating public. For the conscientious man or woman purchasing a fine boat, Hackercraft is more outstanding in style and value —more supreme in speed and performance than ever before. A careful appraisal of Hackercraft—their details and specifications will reveal a number of potent reasons for their widespread preference.

Hackercraft are built throughout of genuine Honduras mahogany ...Hackercraft are double planked with diagonally laid planking... Are copper rivited for strength and staunchness (not screw fastened)...All exposed metal is nickel silver, and chromium plated... Special batten seam construction insures a stout, tight boat . . . All framing is straight grained white oak set on 22" to 26" spaces with extra heavy intermediate framing . . . Finish is hand-rubbed for beauty and permanence . . . The new "200" down-draft Kermath is standard in all but the 24 foot model, which is Gray eight powered...A Hackercraft is two to four miles an hour faster than other boats of equal size and horsepower . . . Hackercraft are hand-built for those who value such construction.

As a buyer of quality yourself—you cannot help but be impressed with the fine quality standards maintained in all Hackercraft.

Ask for this New Hackercraft Catalog . . . It contains the complete story on all 1930 Hackercraft models.

HACKERCRAFT
for
1930

Continuing the New York Success, Hackercraft will be shown at the New England Permanent Motor Boat Show—January 27 to February 1st.—1043 Commonwealth Avenue, Boston, Massachusetts—Also on display New York—5th Avenue at 15th Street—Chicago -Motor Boat Mart Navy Pier

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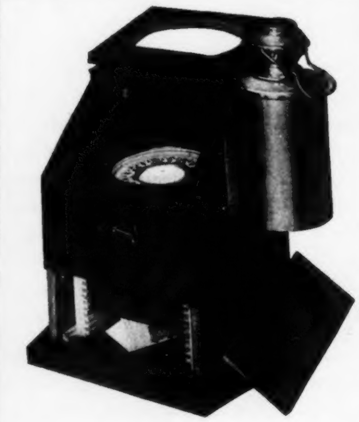
DECK PLATE COMPASSES

In 4", 5", 6" and 7" sizes. Complete, ready to install.



CORRECTOR BINNACLES

5" and 6" compasses, by which you can adjust or correct your own compass.

NEW HELMET HEAD MOTOR BOAT BINNACLE

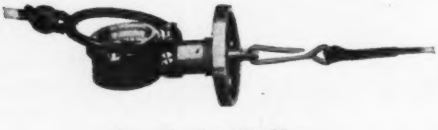
With 5" compass, fitted with electric lights; also with our patent spring suspension for fast yachts.

OUR BRASS SHELF BINNACLE

5" to 8" compasses. Sighting lines, bow and beam bearings.

BRASS MOTOR BOAT BINNACLES

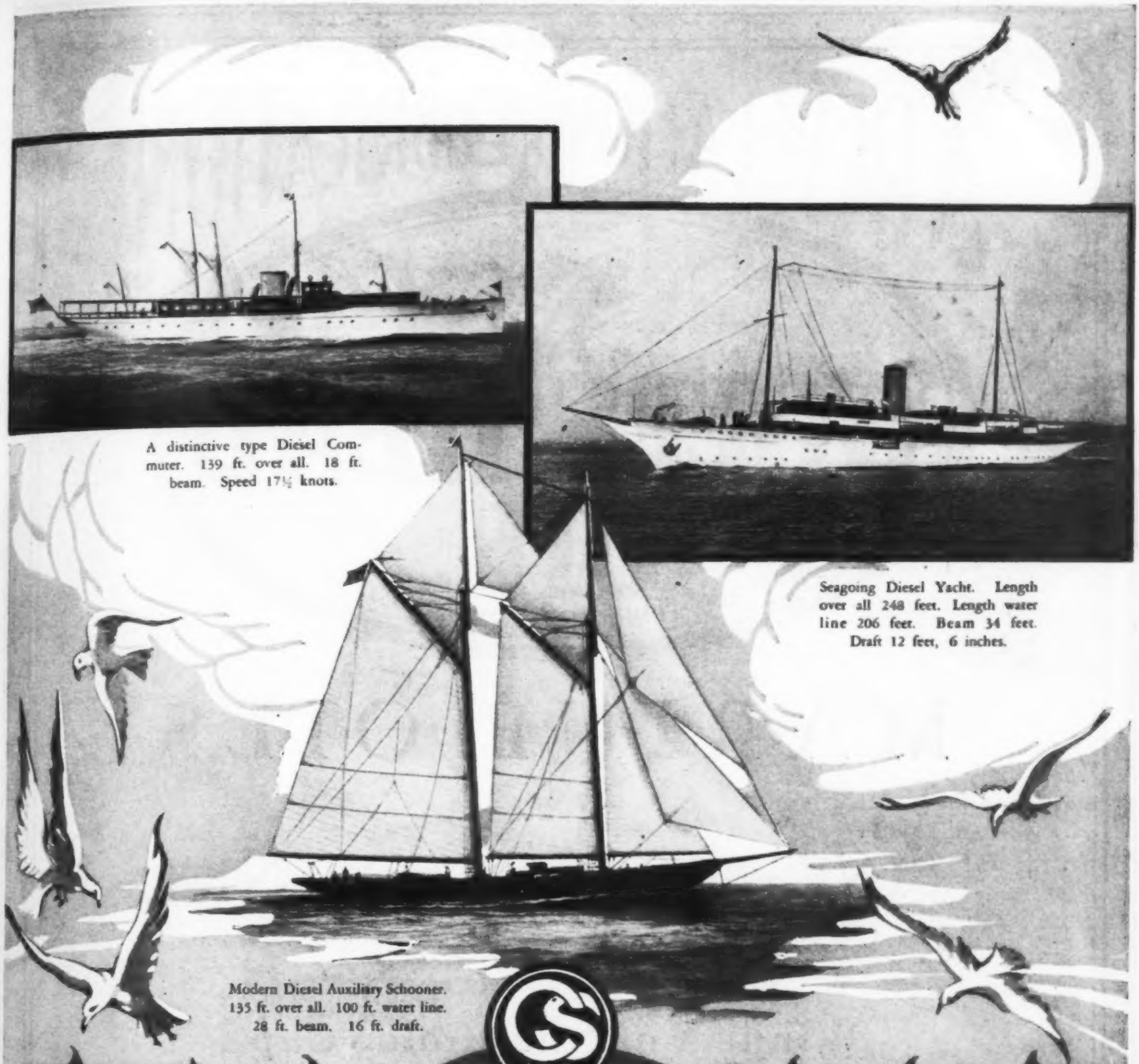
With 4" and 5" compasses Solid, practical, good looking. Oil and electric lights. Heavy brasswork. Top removable.



Agents for Walker Ship and Yacht Taffrail Logs

MOTOR BOAT BINNACLE COMPASS

4" card in liquid, magnified 5½". Neat, serviceable, ornamental for smart runabouts



A distinctive type Diesel Commuter. 139 ft. over all. 18 ft. beam. Speed 17½ knots.

Seagoing Diesel Yacht. Length over all 248 feet. Length water line 206 feet. Beam 34 feet. Draft 12 feet, 6 inches.

Modern Diesel Auxiliary Schooner. 135 ft. over all. 100 ft. water line. 28 ft. beam. 16 ft. draft.

The plans for these three distinctive yachts, to be constructed the coming season, have only recently left our drafting tables. Unquestionably you have some individual ideas which you wish incorporated in your next boat. We would be happy to help you crystalize these ideas in a practical way.

COX & STEVENS, INC.

Naval Architects—Marine Insurance—Yacht Brokers

521 FIFTH AVENUE
(Corner 43rd Street)

NEW YORK CITY
Telephone: VANderbilt 8011

A REVELATION IN LUBRICATION

TRADE MARK
REG. U.S. PAT. OFF.

WOLF'S HEAD OIL

WOLVERINE · LUBRICANTS · COMPANY · INC. N.Y.

MARINE OILS

of the

FINEST PENNSYLVANIA QUALITY

Winner of the Gold Cup Four Years in Succession

Recommended by the Foremost Engine Manufacturers

Used by the Most Critical Yacht and Motor Boat Owners

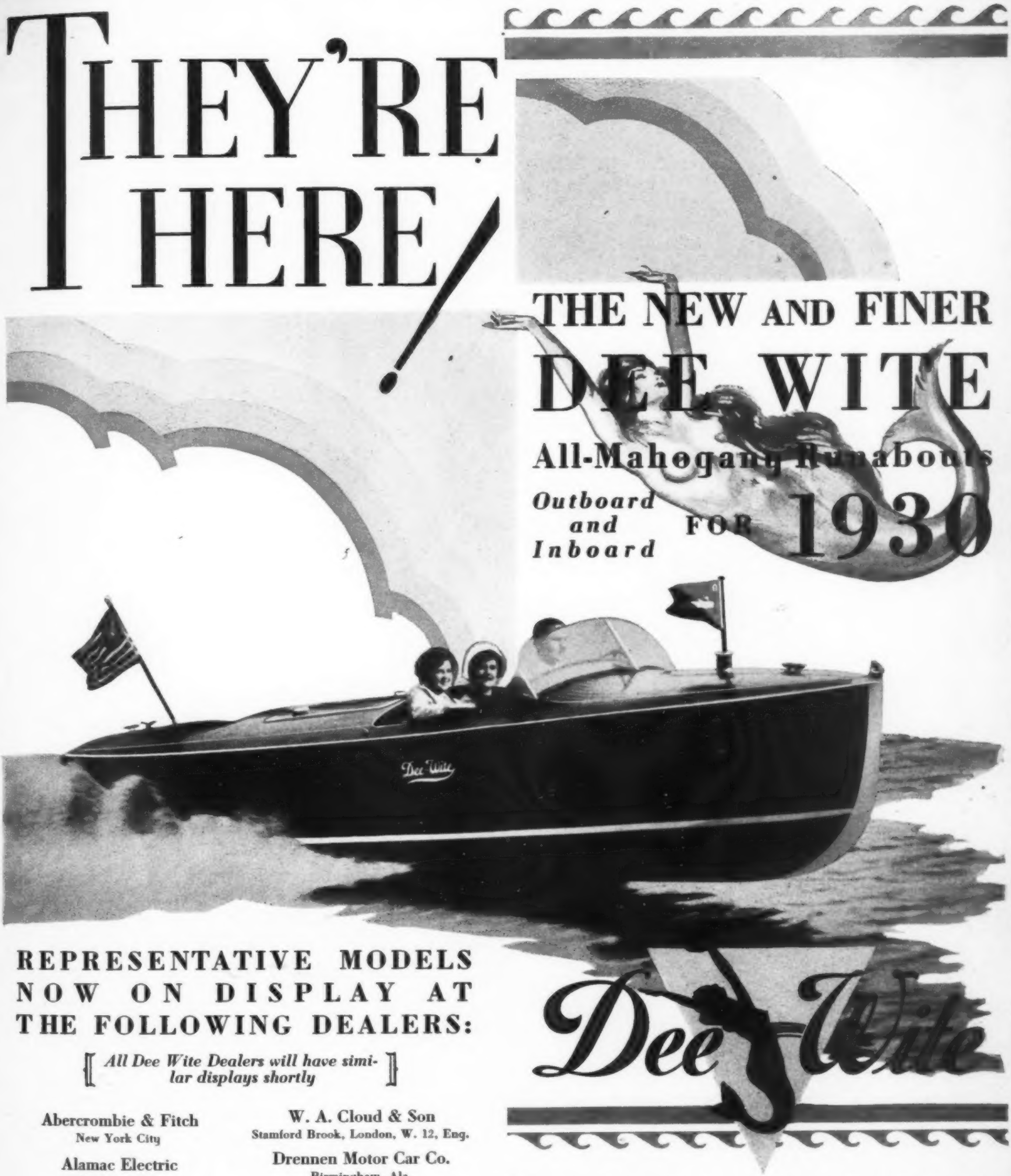
WOLVERINE LUBRICANTS COMPANY, INC.
51 MADISON AVENUE NEW YORK CITY

THEY'RE HERE!

THE NEW AND FINER DEE WITE

All-Mahogany Runabouts

Outboard and Inboard FOR 1930



REPRESENTATIVE MODELS NOW ON DISPLAY AT THE FOLLOWING DEALERS:

[*All Dee Wite Dealers will have similar displays shortly*]

Abercrombie & Fitch
New York City

Alamac Electric
Darien, Conn.

Armstrong & Galbraith
New York City

Arthur Duvic's Sons
New Orleans, La.

Barnes Boat Mart
Cleveland, Ohio

G. A. Beard & Son
Evansville, Ind.

Belle Isle Boat & Engine Co.
Detroit, Mich.

Berkshire Motor Car Co., Inc.
Albany, N. Y.

Worthy R. Brown & Son, Inc.
Lakeside, Ohio

W. A. Cloud & Son
Stamford Brook, London, W. 12, Eng.

Drennen Motor Car Co.
Birmingham, Ala.

Edwards Motors, Inc.
Lexington, Ky.

Feuerbach & Hansen
Brielle, New Jersey

A. B. Hargrave
Lake Gogebic, Mich.

B. H. Hebgen Co.
San Francisco, Calif.

Hill-Madden Boat Corp.
North Tonawanda, N. Y.

Hockenjos & Hockenjos
Lake Hopatcong, N. J.

Kalamazoo Auto Sales Co.
Kalamazoo, Mich.

Lackawanna Automobile Co.
Scranton, Pa.

E. M. Littin Boat Works
Toledo, Ohio

Minnesota Marine Corp.
Minneapolis, Minn.

Peden Company
Houston, Texas

Pneumatic Boat Corp.
Newark, New Jersey

Rochester Marine Co., Inc.
Rochester, N. Y.

Sands Point Shipyard, Inc.
Port Washington, N. Y.

Stutz of Indiana
Indianapolis, Indiana

Syracuse Motor Car Co., Inc.
Syracuse, N. Y.

The Fair
Chicago, Ill.

Travis-Cadillac Co.
Peoria, Illinois

Tyler Company
Baltimore, Md.

Van Dervoort Hdwe. Co.
Lansing, Mich.

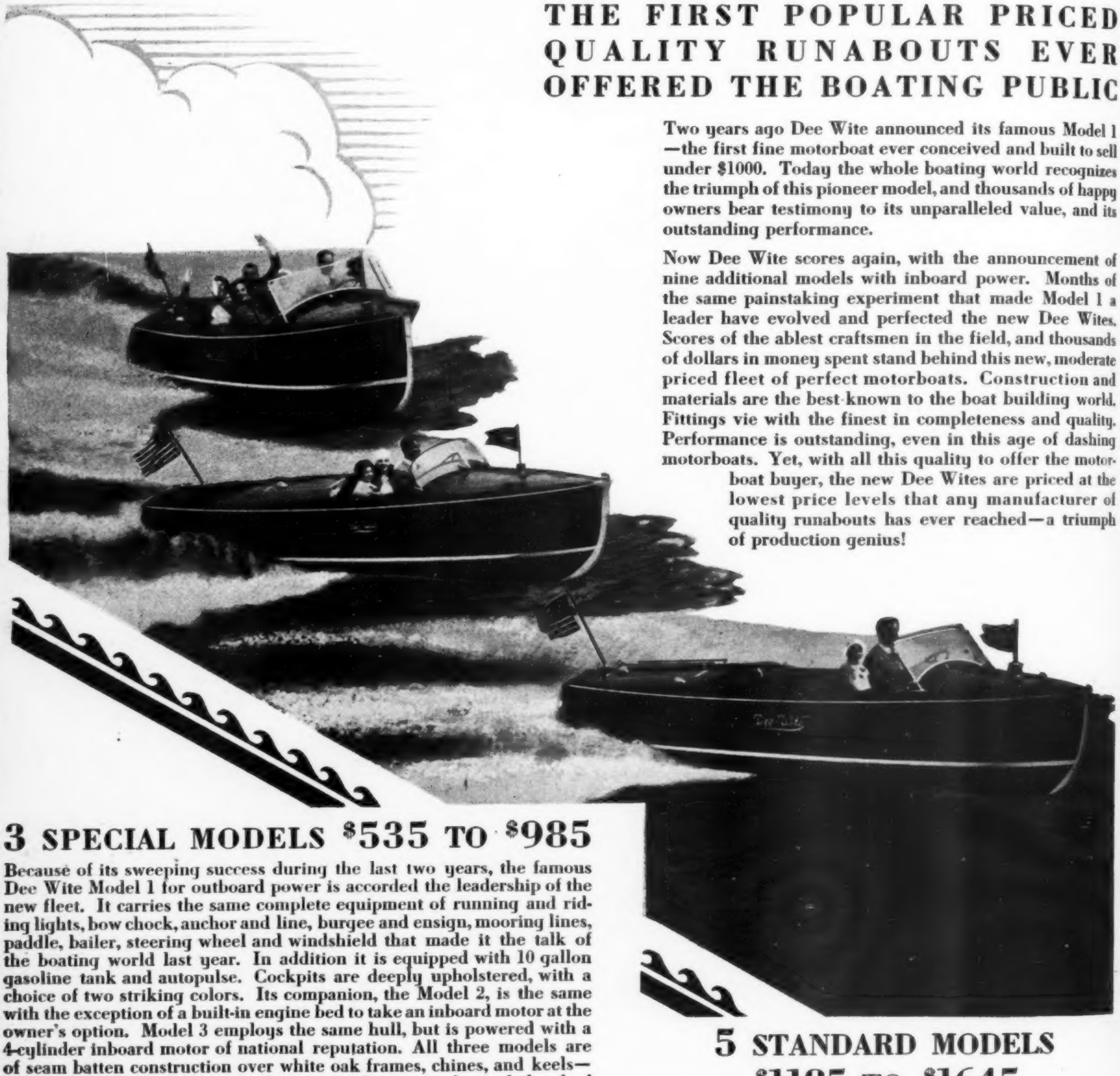
Ventnor Boat Works
Ventnor, Atlantic City, N. J.

Westchester Watercraft, Inc.
New Rochelle, N. Y.

Navy Pier
Chicago, Illinois

10 SMART MODELS -- 16 AND ALL MAHOGANY CONSTRUCTION LUXURIOUSLY UPHOLSTERED AND

THE FIRST POPULAR PRICED QUALITY RUNABOUTS EVER OFFERED THE BOATING PUBLIC



Two years ago Dee Wite announced its famous Model 1—the first fine motorboat ever conceived and built to sell under $1000. Today the whole boating world recognizes the triumph of this pioneer model, and thousands of happy owners bear testimony to its unparalleled value, and its outstanding performance.

Now Dee Wite scores again, with the announcement of nine additional models with inboard power. Months of the same painstaking experiment that made Model 1 a leader have evolved and perfected the new Dee Wites. Scores of the ablest craftsmen in the field, and thousands of dollars in money spent stand behind this new, moderate priced fleet of perfect motorboats. Construction and materials are the best-known to the boat building world. Fittings vie with the finest in completeness and quality. Performance is outstanding, even in this age of dashing motorboats. Yet, with all this quality to offer the motorboat buyer, the new Dee Wites are priced at the lowest price levels that any manufacturer of quality runabouts has ever reached—a triumph of production genius!

3 SPECIAL MODELS $535 TO $985

Because of its sweeping success during the last two years, the famous Dee Wite Model 1 for outboard power is accorded the leadership of the new fleet. It carries the same complete equipment of running and riding lights, bow chock, anchor and line, burgee and ensign, mooring lines, paddle, bailer, steering wheel and windshield that made it the talk of the boating world last year. In addition it is equipped with 10 gallon gasoline tank and autopulse. Cockpits are deeply upholstered, with a choice of two striking colors. Its companion, the Model 2, is the same with the exception of a built-in engine bed to take an inboard motor at the owner's option. Model 3 employs the same hull, but is powered with a 4-cylinder inboard motor of national reputation. All three models are of seam batten construction over white oak frames, chines, and keels—dry, safe and fast at all times—the greatest boating values of the day!

Dee Wite

5 STANDARD MODELS $1185 TO $1645

Models 4, 5, 6, 7 and 8 offer the purchaser increased length and speed. They are all 19′ overall, and are powered with the finest of marine motors, Models 7 and 8 having 6 cylinders. Speeds are 20 to 32 m. p. h. depending on power installation, and all have the fore and aft cockpit arrangement with motor amidships. A partial list of equipment includes lights, anchor and line, mooring lines, ensign and burgee, battery, horn, paddle, bailer, windshield, and lighted dash. On Models 7 and 8 this contains oil gauge, ammeter, water temperature gauge, and precision tachometer. The equipment is the same on Models 4, 5 and 6, less tachometer. All hardware is an integral part of the design, and is specially manufactured for Dee Wite, adding much to the unusually fleet, trim appearance of these beautiful craft.

19 FT. --- 20 TO 40 MILES PER HOUR
4, 6 AND 8-CYL. POWER PLANTS
EQUIPPED $535 TO $2285 F.O.B. FACTORY

A NEW TRIUMPH OF BOAT BUILDING ART

You will thrill with pride to own any member of the 1930 Dee Wite fleet, for more beautiful craft in line and fitting were never launched. The delight of Dee Wite ownership is not confined to a season or two, nor is their goodness confined to external beauty alone. Deep inside seam battened all-mahogany planking lie the solid native white oak frames, chines, and keels that guarantee your boat's soundness and dryness for many years to come. From the sturdy keel to the last lustrous finish coat, no material has been too fine or too rare to go into these finest Dee Wites. When you look at their rakish lines—the high crowned decks and ample freeboard, the flush cockpits, and pronounced tumble-home aft, you will know that none but master designers planned them. Then, when you finally drive a Dee Wite—turn it, bank it, put it through a hundred and one paces in any water or weather, you will know that here in this superb fleet of 10 is the boat for you.

Your local Dee Wite dealer has models on display, and is prepared to give you an actual demonstration of Dee Wite's wonderful performance. Go to him—get complete literature—select the model of your choice. You'll agree with all the world—they're great boats.

All models equipped with lifting rings for yacht tender duty. One man top can be had at slight extra charge. Convenient Commercial Credit deferred payments may be arranged.

2 DE LUXE MODELS
$1785 AND $2285

For the man who demands the utmost in luxury and style from a motorboat, yet who has set a definite sum in his mind to spend for a motorboat, Dee Wite offers these two beautiful models. Model 9 has a 6-cylinder marine motor, located astern, which gives a speed of 32 honest miles an hour—fast enough to leave most other motorcraft astern. Model 10 uses a sweet-running 8 cylinder marine motor—a thoroughbred speedster especially designed for the experienced boatman who wants super speed. Sheer, rakish lines make these two beauties outstanding in any motorboating company. In addition, full upholstered cockpits with reclining seat backs to make a double berth enable you to use either of them for extended hunting, cruising, or fishing jaunts in perfect comfort. Windshields on both de luxe models are safety glass.

OWNERS! DEALERS! GET THE COMPLETE DEE WITE STORY—MAIL THE COUPON FOR FURTHER DETAILS!

Boating enthusiasts who seek the most for their boating dollar are urged to inspect the new 1930 Dee Wite line. Go to your nearest Dee Wite dealer today and see for yourself what magnificent craft Dee Wite designers have prepared for you.

Boat dealers (and other progressive merchants who are interested in expanding their volume and profits) will find in the Dee Wite Sales Franchise an opportunity that comes but seldom in a lifetime. Let us tell you about this unusual opportunity *now*. Use the coupon below.

DWIGHT LUMBER COMPANY, DETROIT, MICHIGAN
Boat Division, Dept. 52

Gentlemen:

Please send me full information on:

( ) The Dee Wite Dealer Franchise
( ) The new 1930 Dee Wite Line

Name________________________

Firm Name____________________

Street_______________________

City_____________ State________

THE FAMOUS DEE WITE MODEL 1

FOR OUTBOARD POWER

DEE WITE brought the quality-built all-mahogany runabout to the average American home in its famous Model 1. Introduced at the New York Motorboat Show last year, it was an immediate sensation, for never before had such beauty of line and completeness of fitting been offered in a high grade motorboat that would sell at a moderate price. Dee Wite's bold pioneering of an ideal brought boating joy to thousands who had never before enjoyed its thrills.

It is with pride that Dee Wite announces that Model 1 will hold an honored place at the head of the great new Dee Wite fleet for 1930. There will be added refinements of line and fitting—a more rakish sweep to the entire craft, and even more outstanding performance. Untold thousands who saw this beautiful craft last year will be buyers in 1930, for the Dee Wite Model 1 still leads the field—unchallenged in its class.

Financially responsible persons who wish to gain success in a most fascinating profession are urged to ask the details of the Dee Wite Franchise proposition. There is no obligation of any kind. Complete catalog on request.

DWIGHT LUMBER COMPANY
Established 1866
Boat Division, Department 52
DETROIT • • MICHIGAN

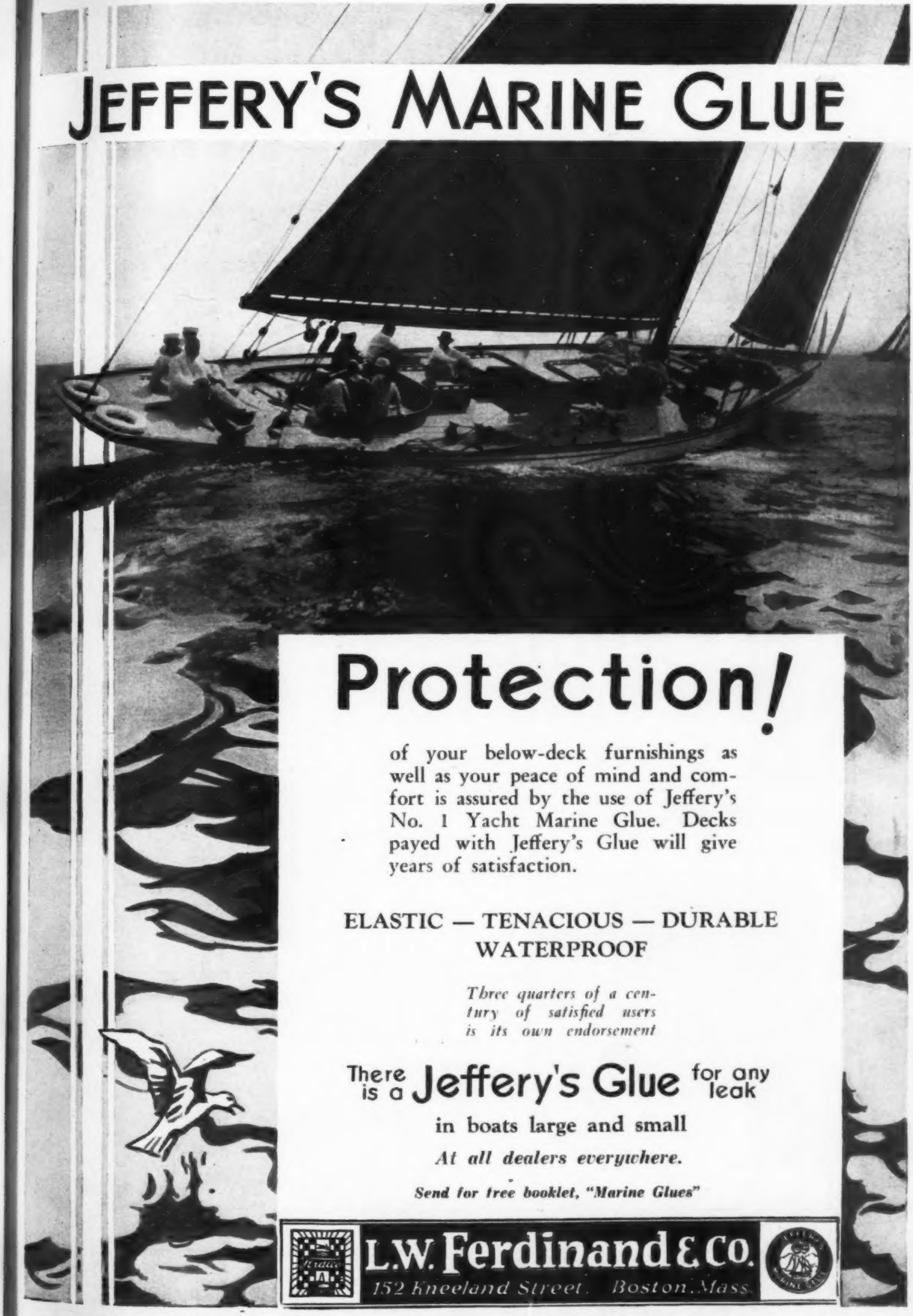
Dee Wite

STANDARD ▾ ▾ ▾ ▾ ▾ ▾ EQUIPMENT

Standard equipment on the above model is unusually complete for a craft of this type.

It includes 10 gal. gasoline tank; maple fender rails; bow chock; mooring cleats forward and aft; fender cleats; bow lamp; stern light; windshield; upholstered seat cushions and backs; Dee Wite burgee; stern ensign; 10 lb. anchor and anchor line; bow and stern lines; 5 ft. paddle; lifting rings; bailer.

JEFFERY'S MARINE GLUE



Protection!

of your below-deck furnishings as well as your peace of mind and comfort is assured by the use of Jeffery's No. 1 Yacht Marine Glue. Decks payed with Jeffery's Glue will give years of satisfaction.

ELASTIC — TENACIOUS — DURABLE
WATERPROOF

Three quarters of a century of satisfied users is its own endorsement

There is a **Jeffery's Glue** for any leak

in boats large and small

At all dealers everywhere.

Send for free booklet, "Marine Glues"

L.W. Ferdinand & Co.
152 Kneeland Street. Boston, Mass.

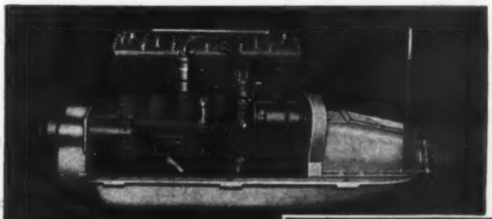
STRUCTURAL AND MECHANICAL SPECIFICATIONS OF CRUISERS AND EXPRESS CRUISERS

(Continued from page 322)

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
JARDINE Atlantic City, N. J.																							
Jardine 35	1	4	1	1	1	Sm. Bot., Lap Side	⅞x1½ Oak 8 & 4	2½x14 Pine Flat	⅞ Cedar	Cpr., Bze. & Brs.	Mahogany	Bronze	Sterling	150	4⅞x6	1600	1500	20	20x20	Everdur	160	50	....
KING SEA SKIFF Highlands N. J.																							
30 Tr. Cab. Cruiser	....	2 & 4	1	1	2	Lap Strake	1⅜x⅞ Oak 9	Oak	¾ Cedar	Cpr. & Brs	Mahogany	Brs. & Bze.	Optional	100	....	......	......	16	....	1⅛ Monel	60	15	....
28 R. D. Cruiser	....	2	1	1	1	Lap Strake	1⅜x⅞ Oak 9	Oak	¾ Cedar	Cpr. & Brs	Mahogany	Brs. & Bze.	Optional	100	....	......	......	20	....	1⅛ Monel	60	15	....
LIGGETT Wyandotte, Mich.																							
35 Single Cabin Cruiser	1	4	1	1	1	Smooth	1¼x4⅜ Oak 10	6x14 Oak	1-1¼ Mah.	Copper	Mahogany	Bronze	Kermath	200	....	......	......	23	21x12	Bronze	140	52	....
35 Double Cabin Cruiser	2	6	1	1	1	Smooth	1¼x1⅜ Oak 10	6x14 Oak	1-1¼ Mah.	Copper	Mahogany	Bronze	Kermath	200	....	......	......	23	21x12	Bronze	140	52	....
35 Sport Cruiser	1	4	1	1	1	Smooth	1¼x1⅜ Oak 10	6x14 Oak	1-1¼ Mah.	Copper	Mahogany	Bronze	Kermath	200	....	......	......	23	21x12	Bronze	140	52	....
35 Dbl. Cab., Open Bdg, Aft Windsh'ld	2	6	1	1	1	Smooth	1¼x1⅜ Oak 10	6x14 Oak	1-1¼ Mah.	Copper	Mahogany	Bronze	Kermath	150	....	......	......	20	21x12	Bronze	140	52	....
35 Double Cabin, Enclosed Bridge	2	5	1	1	1	Smooth	1¼x1⅜ Oak 10	6x14 Oak	1-1¼ Mah.	Copper	Mahogany	Bronze	Kermath	150	....	......	......	20	21x12	Bronze	140	52	....
40 Double Cabin Cruiser	2	8	1	2	2	Smooth	1¼x1½ Oak 10	6x16 Oak	1 Mah.	Copper	Mahogany	Bronze	Kermath	200	....	......	......	20	22x14	Bronze	160	60	....
47 Dbl. Cab., Encl. Deckhouse	2	9	1	3	3	Smooth	1½x1¾ Oak 10	7x27 Oak	1¼ Mah.	Copper	Mahogany	Bronze	Kermath	200	....	......	......	18	2-22x14	Bronze	260	100	....
MATTHEWS Port Clinton, Ohio																							
38 Single Cabin	1	4	1	1	1	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	125	4⅝x5⅜	1750	1200	17	21x13	1⅜ Bronze	100	65	....
38 Double Cabin (Open Bridge)	2	7-9	1	2	2	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	125	4⅝x4⅜	1750	1200	17	21x13	1⅜ Bronze	120	100	....
38 Double Cabin (Encl. Bridge)	2	7-9	1	2	2	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	125	4⅝x5½	1750	1200	15	21x13	1⅜ Bronze	120	100	....
38 Day Cruiser (Open Bridge)	1	5-6	1	1-2	1	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	125	4⅝x5½	1750	1200	16	21x13	1⅜ Bronze	120	100	....
38 Day Cruiser (Encl. Bridge)	1	5-6	1	1-2	1-2	Smooth	Oak 1¼x1½	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	125	4⅝x5⅜	1750	1200	15	21x13	1⅜ Bronze	120	100	....
38 Sport Cruiser	1	4	1	1	1	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1850	1200	19	21x13	1¾ Bronze	175	100	....
38 De Luxe Double Cabin Sport	2	6-7	1	2	2	Smooth	Oak 1¼x1½ 9	7x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1850	1200	18	21x13	1⅜ Bronze	175	100	....
46 Single Cabin	1-2	4	1	2	2	Smooth	Oak 1¼x1½ 9	7½x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1900	1200	17	21x13	1⅜ Bronze	175	100	....
46 Double Cabin (Open Bridge)	2	8-10	1	3	3	Smooth	Oak 1¼x1½ 9	7½x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1900	1200	17	21x13	1½ Bronze	175	100	....
46 Double Cabin (Encl. Bridge)	2	8-10	1	3	3	Smooth	Oak 1¼x1½ 9	7½x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1900	1200	17	21x13	1⅜ Bronze	175	100	....
46 Sport Cruiser	1	4	1	1	1	Smooth	Oak 1¼x1½ 9	7½x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1900	1200	18	21x13	1½ Bronze	175	100	....
46 De Luxe Double Cabin Sport	2-3	8-9	1	3	3	Smooth	Oak 1¼x1½ 9	7½x12 Oak	1⅛ to ⅞ Phil.	Cpr. & Glv.	Philippine	Bronze	Kermath	150	5x5¾	1900	1200	17	21x13	1½ Bronze	250	100	....
N. Y. YACHT, LAUNCH & ENGINE New York, N. Y.																							
77 Cruiser	4	6	Yes	2	2	Double	12	Oak	Fir	Bronze	Mahogany	Bronze	2-20th Cent.	2-100	6½x8½	600	4500	14	32x30	Bronze	600	600	4-KW. Universal
OWENS Annapolis, Md.																							
26 Cruiser	1	2	1	1	1	Smooth	Oak 9	3 Oak	⅞ Ced., ⅛ Ma.	Copper	Mahogany	Bronze	Optional:	40-110	....	......	......	14-24	....	....	50	20	....
PLAYMATES Brooklyn, N. Y.																							
22 Baby Sedan	....	1	....	....	....	Sm. or Lap	¾x1⅜ Oak 7	2½ Pine	¾ Ced. or Ma.	Cpr. & Brs.	Mahogany	12x14 Brass	Chrysler	70	3¼x4½	2200	800	20	16x10	1⅜ Bronze	50	....	....
26 Junior Sedan	....	1	....	....	....	Sm. or Lap	¾x1½ Oak 7	4 Pine	⅞ Ced. or Ma.	Cpr. & Brs.	Mahogany	14x16 Brass	Chrys. AMR.	110	3⅝x5	2800	1000	26	18x22	1⅜ Bronze	70	....	....
29 Playmate Sedan	....	1	....	....	....	Sm. or Lap	¾x1½ Oak 7	4 Pine	⅞ Ced. or Ma.	Cpr. & Brs.	Mahogany	14x16 Brass	Chrys. AMR.	110	3⅝x5	2800	1000	23	18x20	1⅜ Bronze	100	....	....
REABER Seattle, Wash.																							
Speedcruiser	1	2	1	1	1	Smooth	⅞x1¼ Oak 8	3½ Fir	¾ Cedar	Screws	....	Bronze	Gray	30	3⅜x4¼	2400	400	15	....	....	40	20	....

The "FALCON" SERIES—

SPEED.... STAMINA.... SMOOTHNESS



The Falcon Series includes the following 6 models: 5 H.P. "single"—10 H.P. "twin"—15 H.P. "four"—25 H.P. "four"—40 H.P. "four"—50 H.P. "six."

...and "SUPER-SMOOTH" Electric Plants

The "Super-Smooth" Series of Electric Plants for marine use includes 9 models from 350 watts to 7½ K.W. in 12-32 and 110 volts.

The fleet-winged falcon of the air and the "Falcon" Series have many characteristics in common with their dominating power . . . darting speed . . . inborn stamina . . . and gliding smoothness.

These characteristics of superiority—which distinguish the "Falcon" Series from all other marine engines and which have won them such decisive popularity—were the direct result of putting *surplus strength* where great strength is needed . . . of designing *perfectly* balanced crankshafts . . . and of *using* the quality of materials and workmanship that suffer no apologies after years and years of hard service.

The same holds true with the distinctly marine "Super-Smooth" Electric Plants. They are driven by the smooth power of "Falcon" Engines, which assures the smooth operation and flickerless current output that has earned the enthusiasm of so many thousands of satisfied users.

When writing state the size of engine or electric plant in which you are interested.

United States Motors Corporation

Central & Eastern Canada
Sales Office
Maddox Engineering Co.
75 Adelaide St., W.
Toronto, Ont., Canada

Factory & Main Office
102 Nebraska Street
Oshkosh, Wisconsin

Pacific Coast Representative
Machinery Exporters Ltd.
Merchants Exchange Bldg.
San Francisco, Calif.

BEAUTIFUL!

that's what your guests will exclaim if your boat is equipped with

SANDS
Plumbing Fixtures

SANDS quality is supreme—there is nothing better in marine plumbing fixtures. For eighty years Sands Pump Water Closets and Lavatories have been the recognized standard. They are more attractive in design and cost less in the long run because of their superior construction and materials.

Practically all the leading yacht builders now supply Sands Fixtures as regular equipment. They enhance the value of any boat.

Sands Fixtures include everything required for ship's plumbing, and are made in many styles, sizes and colors to suit all types of boats from the little cruiser to the palatial yacht.

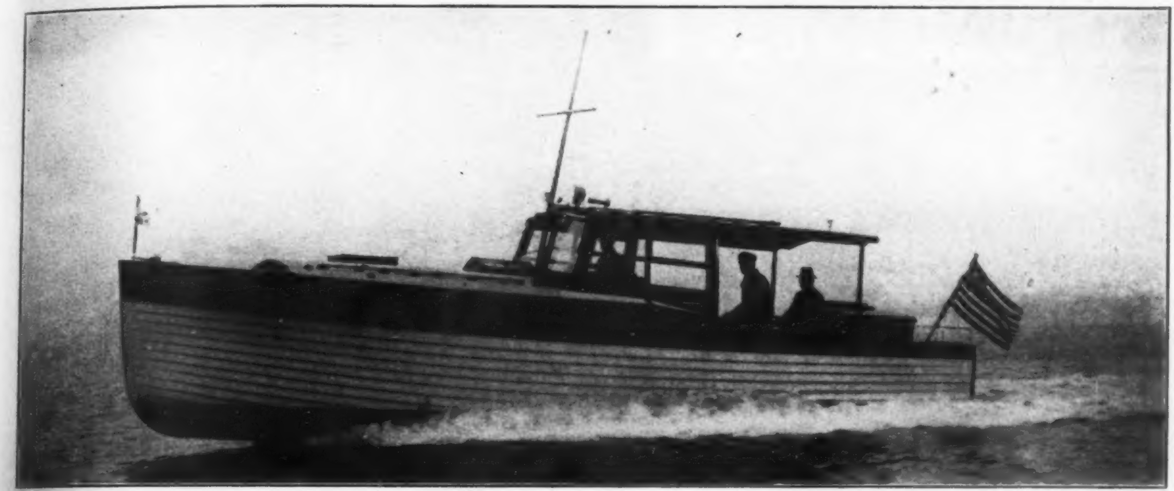
Write for a Sands catalog and see how little it will cost to have a bath room that you will be proud of.

All the lovely appointments and conveniences of your home bath room can be fitted into a surprisingly small space on your boat — in glistening white or modern pastelle colorings it will add the finishing touch of refinement, and you will never regret the investment or the space devoted to it.

A. B. SANDS
& SONS CO.

20-24 VESEY ST.
NEW YORK
CITY

Johnson 38



Thirty-Eight Feet of Sea-Going Comfort

THE 1930 Johnson Thirty-Eight, available in single or double cabin and single or twin screw, with speeds up to 32 miles per hour, brings to you new comforts and faster traveling in sea-skiff cruisers.

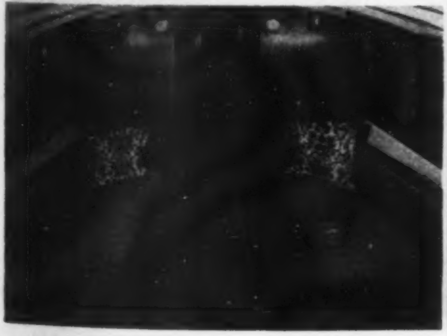
This handsome deep-sea craft represents the final word in sea-skiffs. Its sleek streamline design, staunch construction, luxurious accommodations for six to eight people, fast speeds and completeness of equipment, leave nothing more to be desired, even by the most critical boat buyer.

See the Johnson Thirty-Eight at Space A-5 and 6, Motor Boat Show, Grand Central Palace, New York, January 17th to 25th; or write today for further information

Early Deliveries Assured

HUBERT S. JOHNSON
BOAT & ENGINE WORKS
BAYHEAD, NEW JERSEY

The main cabin, looking towards galley and lavatory



The Style HIGH LIGHT of the Show

1928, 1929 and now 1930. Each National Motor Boat Show has marked the debut of something new in seagoing luxury by Gar Wood. This year, it is the

LANDAU

by Gar Wood that provides the STYLE high light of the Show.

Pleasure craft from the shops of the race-boat king, that are built side by side with the Miss America, have always had the reputation of being the softest-riding of all speed boats. And the 1930 models, completely re-designed, attain new heights of riding and driving ease and represent new triumphs in beauty and luxury.

When you visit the Show, as you will, of course, introduce your weather eye to a pleasurable new sensation. Here, in glistening mahogany and chrome-plated bright work, is the master interpretation of what a boat can be!

Ten New Models—30-55 m.p.h., $3,150-$12,950

Space "N", Mezzanine, Grand Central Palace

GAR WOOD *Inc.*

THE GREATEST NAME IN MOTORBOATING

415 Connecticut Ave.
DETROIT, MICH.

1860 Broadway
NEW YORK CITY

Gar Wood, Inc., 415 Connecticut Ave., Detroit, Mich.

Gentlemen:—I shall be glad to have your booklet on the 1930 Gar Wood Boats—without obligation, of course.

Name________________________________

Street or R. F. D.________________________________

City or County________________State____________

M. B. 2-30

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THE MAXIM SILENCER
MODEL M 2
OUTLET
MADE BY
INLET
THE MAXIM SILENCER CO.

The New
MAXIM
SILENCER
For All Motor Boats

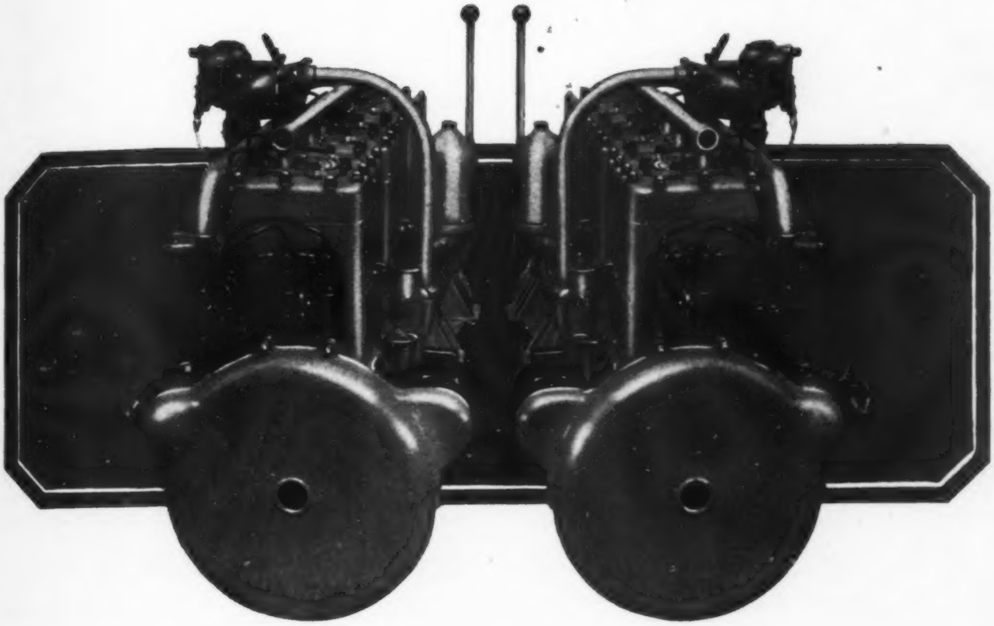
The best obtainable combination of

PRICE
SMALL SIZE
LIGHT WEIGHT
LOW BACK PRESSURE
RESISTANCE TO CORROSION
and
HIGH NOISE REDUCTION

MODEL M2

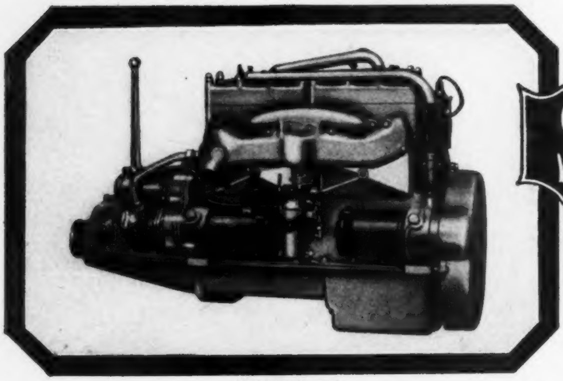
Sizes 1½″ to 4″
Ask your dealer or send
for further information.

THE MAXIM SILENCER COMPANY
Hartford, Connecticut

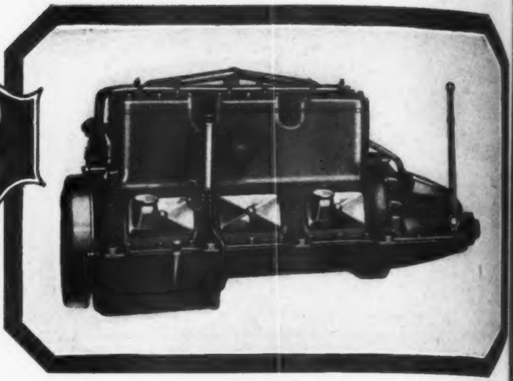


SCRIPPS

• THE MOTOR THAT CROSSED THE ATLANTIC •



MODEL 84



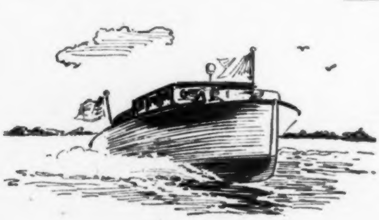
MODEL F-6

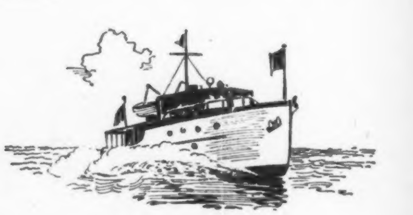
SCRIPPS ACCEPTANCE

LONG conceded by marine engineers generally to exemplify all that is best in marine motor design; continually studied by contemporaries as a guide to the development of their own products; SCRIPPS motors have gradually impressed themselves, through their sheer merit alone, upon the consciousness of that final and unerring judge—the user. No motor stands today as firmly entrenched in public confidence as the SCRIPPS.

Scripps motors for 1930 emphasize the excellence and stability of Scripps fundamental design. The same smooth simplicity of outline, the same effective

MODEL F-4	*25-40 H. P.*	*1000-1600 R. P. M.*
MODEL 84	*75 H. P.*	*2800-3000 R. P. M.*
MODEL F-6	*50-90 H. P.*	*1200-2000 R. P. M.*
MODEL 120	*70-100 H. P.*	*1600-2000 R. P. M.*
MODEL 124	*135 H. P.*	*2800-3000 R. P. M.*





TEN MODELS—15 TO 200 H. P.—HIGH SPEED AND MEDIUM DUTY

SCRIPPS

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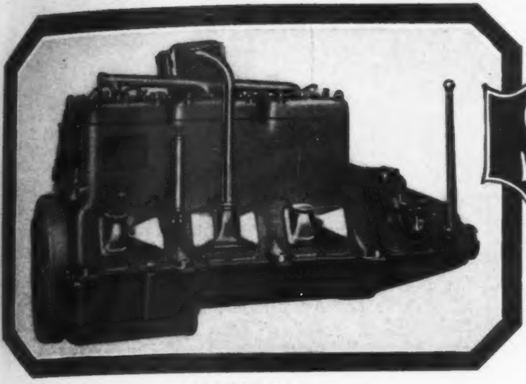
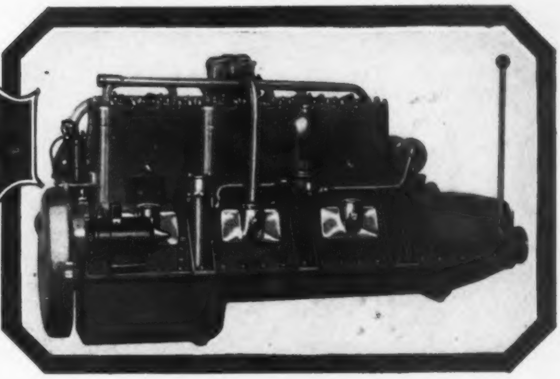


MODEL 120



MODEL 202

GREATER THAN EVER

down-draft carburetion, the same efficient lubrication, the same well balanced operation, the same maximum power within minimum dimensions are present without radical changes only augmented here and there by skillful refinement of detail.

To meet the needs of new development in hull design, two additional models have been created; model 84—75 H. P. at 2800 R. P. M. for the 18 to 20 foot runabout; model 120—100 H. P. at 2000 R. P. M. for the smaller express cruiser.

Interesting literature will be mailed upon request.

MODEL 160	
100 H. P.	*1200-1800 R. P. M.*
MODEL 162	
150 H. P.	*1800-2300 R. P. M.*
MODEL 170	
125 H. P.	*1200-1800 R. P. M.*
MODEL 172	
175 H. P.	*1800-2300 R. P. M.*
MODEL 202	
200 H. P.	*2000-2300 R. P. M.*

SCRIPPS MOTOR COMPANY, 5819 LINCOLN AVE., DETROIT, MICHIGAN

SCRIPPS

• THE MOTOR THAT CROSSED THE ATLANTIC •

SCRIPPS
Powered

The wide acceptance of SCRIPPS motors is best expressed by the ever growing list of standardized craft offered with SCRIPPS as standard or optional equipment.

◆

BANFIELD "26"

CHRIS-CRAFT *
6 *Models*

CORSAIR "36"

GAR WOOD "40"

HACKERCRAFT *

MATTHEWS *

MINETT-SHIELDS

NORTH STAR

ROBINSON SEA GULL
(*Twin Installations*)

SEA LYON "40" *

STEPHENS

WHEELER "PLAYMATES" *

◆

Foreign

BRITISH POWER BOATS
(England)

CLAUS-CRAFT
(Germany)

OSBORNE-CRAFT
(England)

DESPUJOLS
(France)

* Optional

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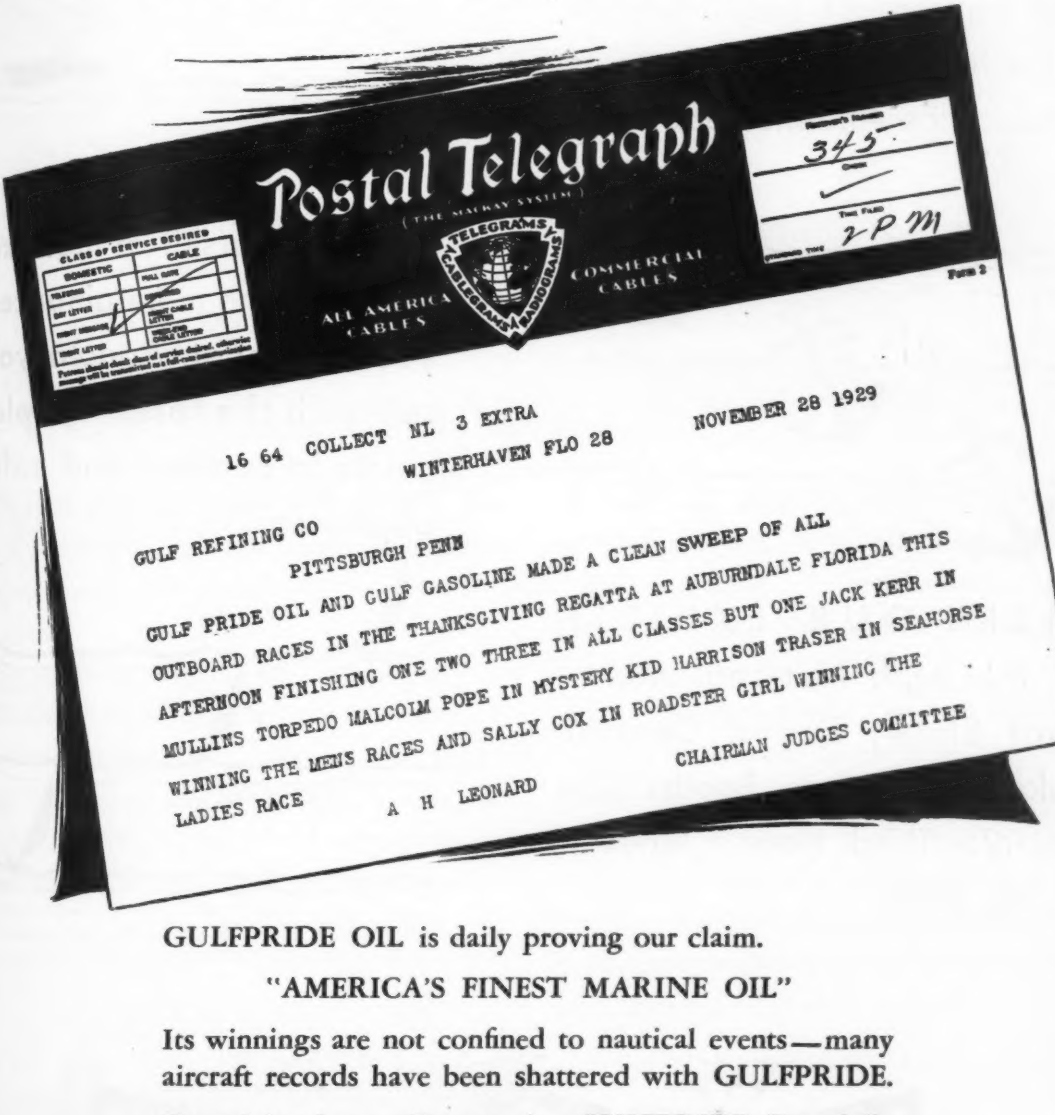

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PITTSBURGH PENN

GULF PRIDE OIL AND GULF GASOLINE MADE A CLEAN SWEEP OF ALL OUTBOARD RACES IN THE THANKSGIVING REGATTA AT AUBURNDALE FLORIDA THIS AFTERNOON FINISHING ONE TWO THREE IN ALL CLASSES BUT ONE JACK KERR IN MULLINS TORPEDO MALCOLM POPE IN MYSTERY KID HARRISON TRASER IN SEAHORSE WINNING THE MENS RACES AND SALLY COX IN ROADSTER GIRL WINNING THE LADIES RACE

A H LEONARD
CHAIRMAN JUDGES COMMITTEE

GULFPRIDE OIL is daily proving our claim.

"AMERICA'S FINEST MARINE OIL"

Its winnings are not confined to nautical events—many aircraft records have been shattered with GULFPRIDE.

One trial and you will appreciate GULFPRIDE. Especially adaptable to outboard mixtures.

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PITTSBURGH, PA.

District Sales Offices: New York, Philadelphia, Boston, Louisville, Atlanta, New Orleans, Houston
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THIS ORGANIZATION which has for the past seventy-five years supplied the hardware and equipment requirements of the finest builders and repair yards of the Atlantic Seaboard,

INVITES YOU to avail yourself of that same service in the maintainance of your own boat. Aquaint yourself with the latest developments in comfort and safety appliances.

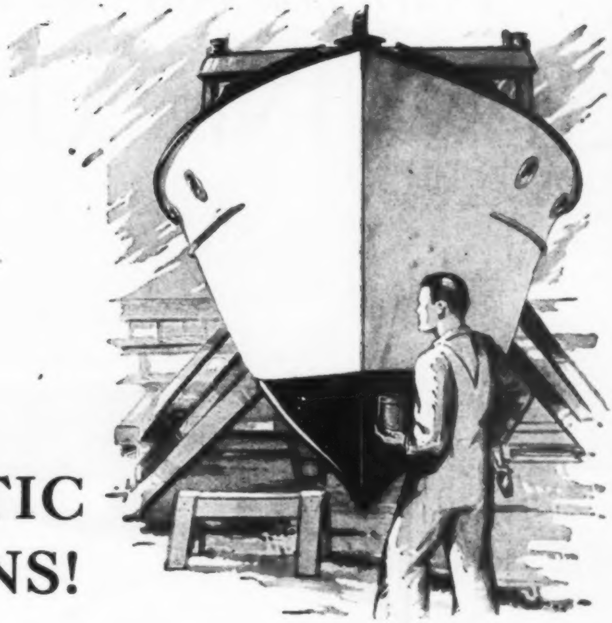
VISIT OUR EXHIBIT at the 25th National Motor Boat Show, Grand Central Palace, New York. Booths 123-124-125 Third Floor. January 17-25, 1930.

W. J. TIEBOUT
NEW YORK
118 CHAMBERS STREET

MARINE HARDWARE AND EQUIPMENT

"That job's done for another ten years!"

A caulked boat
STAYS caulked
when you use...



KUHLS ELASTIC COMPOSITIONS!

ONCE a boat is caulked with KUHLS, you can forget it for many years. Thousands of tests every year prove KUHLS' longer life of service.

Once applied, KUHLS ELASTIC COMPOSITIONS become actually a part of the wood ...elastic, never brittle... always a tight joint!

KUHLS never sets hard. Thus, it does not crack or crumble—it gives with expansion and contraction—flexes with the stress and strains to which the seams are subjected—but REMAINS A SNUG, WATERTIGHT JOINT!

Easier to apply . . . a permanent protection for your boat which defies pitching and pounding, time and tide!

For these reasons—because it serves its purpose better than any other preparation made today—KUHLS Elastic Composition is the sole choice of hundreds of prominent naval architects, scores of America's greatest boat builders, hundreds of repair yards and thousands upon thousands of boat owners. Make it your choice for the same reasons!

Every Banfield runabout and all cruiser models use KUHLS COMPOSITIONS in their decking.

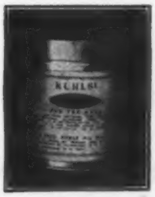
Write today for literature.

No. 1 for deck
No. 2 for hull
No. 3 for laying canvas

H·B·FRED KUHLS

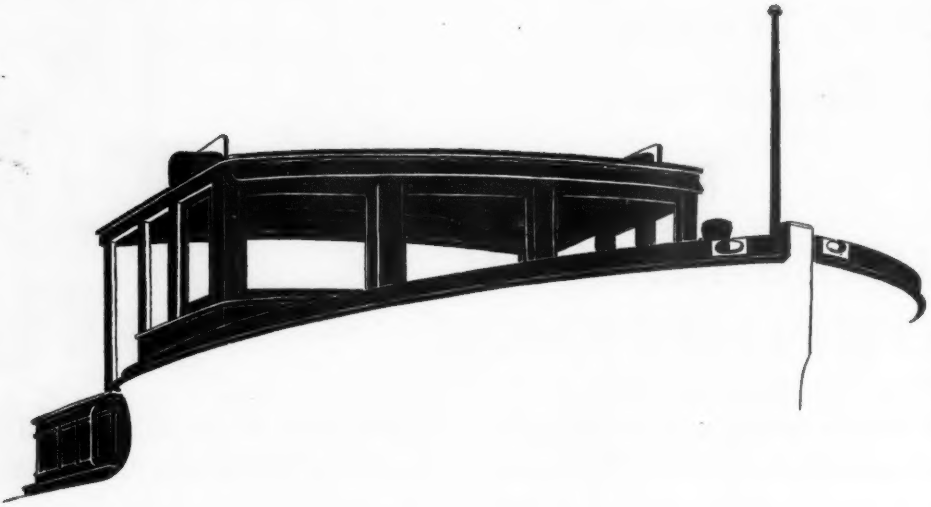
Sole Manufacturers · · Established 1889

65th Street and 3rd Avenue,.....Brooklyn, N.Y.



When you buy your boat demand - - -

GENUINE MAHOGANY



When you buy your boat do not be satisfied with the bare statement that the cabinet work is Mahogany. Be sure it is Genuine Mahogany. The finest Genuine Mahogany comes from the jungles of Mexico, Central and South America and the West Indies and should not be confused with woods from the Philippine Islands or other substitutes masquerading under the name of Mahogany. These woods are not botanically Mahogany nor do they have the properties and characteristics which have given Mahogany its reputation as the King of Cabinet Woods. Genuine Mahogany has been the preeminent wood for the construction of fine boats for over 200 years . . . because it does not warp or shrink as much as other woods . . . because of its rich color and luster, and because it does not fade but becomes even more beautiful with age.

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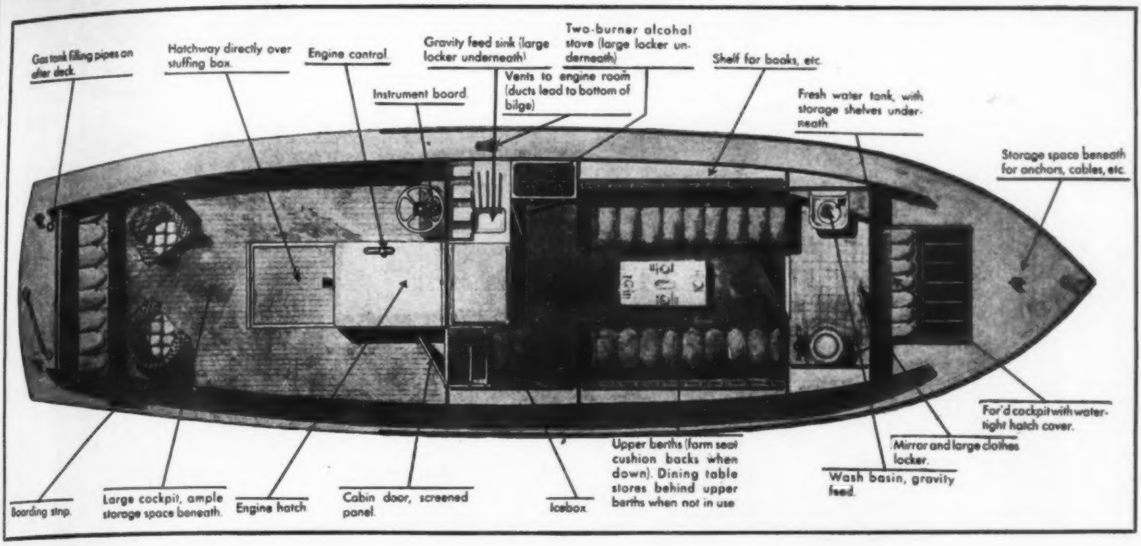
Astoria Importing and Manufacturing Co.
INCORPORATED
1031 Tenth Avenue **Long Island City**

Genuine
MAHOGANY


Gas tank filling pipes on after deck.
Hatchway directly over stuffing box.
Engine control.
Instrument board.
Gravity feed sink (large locker underneath)
Two-burner alcohol stove (large locker underneath)
Vents to engine room (ducts lead to bottom of bilge)
Shelf for books, etc.
Fresh water tank, with storage shelves underneath
Storage space beneath for anchors, cables, etc.
For'd cockpit with watertight hatch cover.
Mirror and large clothes locker.
Wash basin, gravity feed.
Upper berths (form seat cushion backs when down). Dining table stores behind upper berths when not in use
Icebox
Cabin door, screened panel.
Engine hatch
Large cockpit, ample storage space beneath.
Boarding strip.

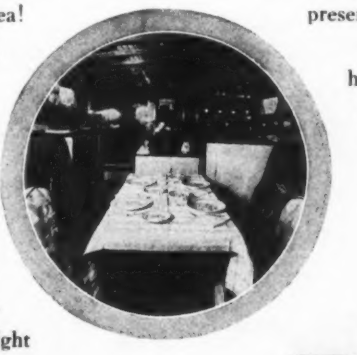
A "34" that's as RUGGED and SAFE as a 40-footer

...and seems even more roomy!

THE most unusual cruiser afloat today! Built by seasoned craftsmen to meet the practical requirements of hardest duty—oversize in every detail of hull and superstructure—and proved for stamina in the open sea! Every provision made for the utmost safety, both in handling and in operation.

So cleverly are her proportions designed that she gives the impression—both above and below deck of being considerably larger than her actual 34 feet. Seats six to eight people in her roomy after cockpit — without crowding. Forward cockpit is an innovation — seats two. Back makes a watertight hatch when not in use.

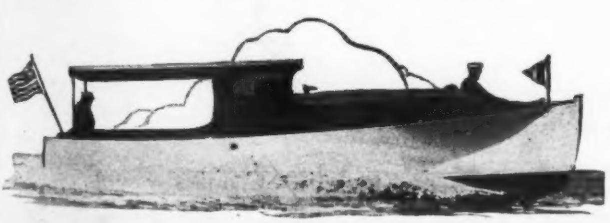
Her spacious cabin provides more than six feet of headroom—space for six to dine—soft berths for four to sleep. Dining table folds out of sight. Galley vies with cabin for cleverness of arrangement. Fully equipped toilet. Oceans of storage space. Altogether the most remarkable boat of her type—incorporating every idea for comfort and safety — and priced considerably under the present price for 34-footers.



Also available in a double-cabin model; having an after cabin which is unbelievably large for a boat this size.

Be sure to see the Staples Johnson Marblehead "34" at the show or write for illustrated literature.

The New
STAPLES JOHNSON
"Marblehead"
34



STAPLES, JOHNSON & CO.
405 POOL STREET
BIDDEFORD **MAINE**

Sales and Service

N. Y. Boat Service Corp.
Clason Point
New York City

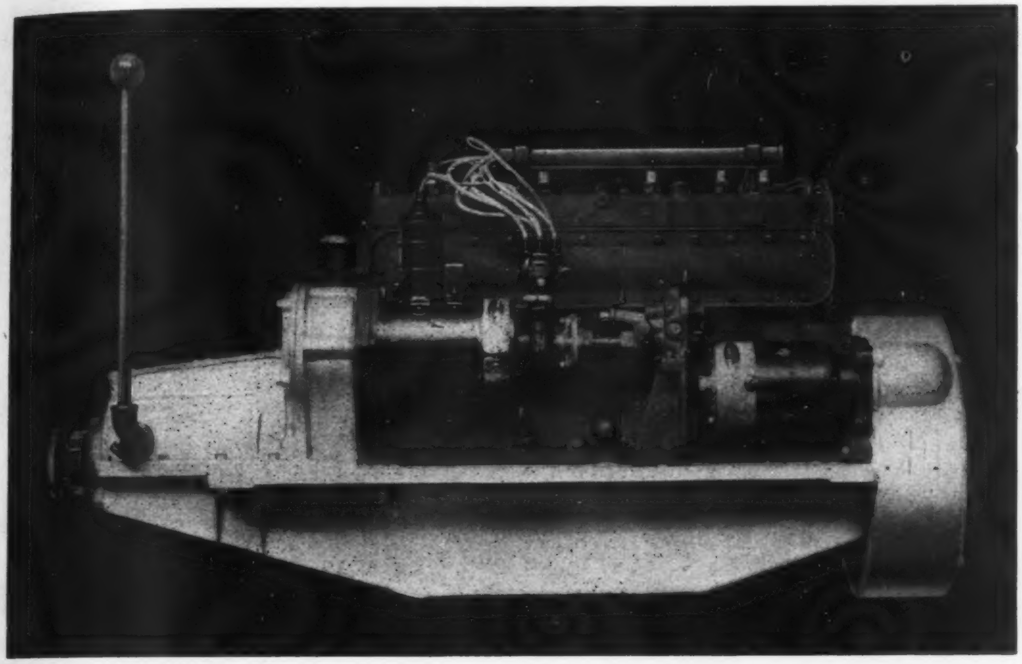
Savage Boat Co., Ltd.
585 Boylston St.
Boston, Mass.

IT COSTS LESS TO BUILD BETTER BOATS IN MAINE

STRUCTURAL AND MECHANICAL SPECIFICATIONS OF CRUISERS AND EXPRESS CRUISERS

(*Continued from page 334*)

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
RICHARDSON CRUISABOUT **No. Tonawanda, N. Y.**																							
29 Single Cabin....	1	4	1	1	1	Smooth	1⅛x1⅜ 10	3	⅞	Galvanized	Mahogany	Bronze	Gray	60	3⅜x4	1600	660	13	16x12	1⅛ Bronze	60	25	....
29 Double Cabin...	2	6	1	1	1	Smooth	1⅛x1⅜ 10	3	⅞	Galvanized	Mahogany	Bronze	Gray	60	3⅜x4	1600	660	13	16x12	1⅛ Bronze	60	25	....
RICKRUISER **New York, N. Y.**																							
30...............	1	4	1	1	2	Smooth	Oak 10	Oak	Mahogany	Bronze	Mahogany	Bronze	Gray	Opt.	....	....	....	19	17x12	1⅛ Tobin	70	40	....
ROBINSON SEA GULL **Benton Harbor, Mich.**																							
Standard Sedan...	1	4	1	1	1	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Hall Scott	200	5x7	1725	1650	32	20x22	1⅜ Monel	160	50	....
Ford Cockpit Sedan	1	2–4	1	1	1	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Hall Scott	200	5x7	1725	1650	32	20x22	1⅜ Monel	160	50	....
40 Cruiser.......	1	4	1	1	1	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Optional	200	5x7	1725	1650	32	20x22	1⅜ Monel	160	50	....
40 Twin Screw....	1	4	1	1	1	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Scripps	150	4½x6¾	1725	1650	32	20x22	1⅜ Monel	160	50	....
45 Tw. Sc. Sgl. Cab.	1	4	1	1	1	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Hall Scott	240	5x7	1950	1650	32	20x22	1⅜ Monel	300	50	....
45 Tw. Sc. Db. Cab.	2	8	1	2	2	Smooth	12	One Piece	Mahogany	Brs. & Cpr.	Mahogany	Bronze	Hall Scott	240	5x7	1950	1650	32	20x22	1⅜ Monel	300	50	....
SEA BRIGHT DORY WORKS **Long Branch, N. J.**																							
26 Sea Skiff Cruiser	1	4	1	1	1	Lap Strake	6	2x24 Flat	¾	Copper	Mahogany	Bronze	Optional	110	....	2–3000	900	21	....	1⅛ Monel	80	60	Optional
30 Sea Skiff Cruiser	1	6	1	1	1	Lap Strake	6	3x30 Flat	⅞	Copper	Mahogany	Bronze	Optional	200	....	2200	1500	22	20x14	1⅜ Monel	150	80	400 W. U. S.
36 Sea Skiff Cruiser	2	8	1	1	1	Lap Strake	6	4x36 Flat	1	Copper	Mahogany	Bronze	Optional	200	....	1800–2000	1500	18	....	1⅜ Monel	200	100	400 W. U. S.
SEVEN SEAS CRUISERS																							
Seven Seas Cruiser	2	6	1	3	2	Smooth	1⅝x1⅞ Oak 12	6 Oak	Mahogany	Copper	Teak	2 Bronze	2 Sterlings	180 ea.	5½x6	1800	1500	23	22x16 Columb'n	1½ Bronze	400	200	Stearns 32-V.
STAPLES JOHNSTON **Biddeford, Me.**																							
Marblehead.......	....	4	1	1	1	Smooth	1⅜x1⅝ 10	3 Oak	⅞ Mah.	Bronze	Mahogany	Bronze	Kermath	100	4⅜x5½	1800	1205	17	20x14	1⅛ Everdur	100	40	....
STEPHENS **Stockton, Cal.**																							
34...............	1	4	1	1	1	Smooth	1¼x1½ Oak 9	3x8 Pine	⅞ Cedar	Bronze	Teak	Bronze	Scripps	80	3¾x5	1800	750	16	16x13	1¼ Bronze	120	70	....
43...............	2	6	1	2	2	Smooth	1½x2 Oak 9	4x8 Pine	1⅛ Cedar	Bronze	Teak	Bronze	2 Scripps	160	3¾x5	1900	1500	18	16x13	1⅜ Bronze	250	100	....
47...............	2	7	1	2	2	Smooth	1½x2 Oak 9	4x8 Pine	1⅛ Cedar	Bronze	Teak	Bronze	2 Scripps	400	5x5¾	2200	2270	30	18x18	1½ Bronze	400	120	....
50...............	2	8	1	3	3	Smooth	2x2 Oak 10	6x8 Pine	1¼ Cedar	Bronze	Teak	Bronze	2 Scripps	400	5x5¾	2100	2270	25	18x18	1½ Bronze	400	120	....
TOMS RIVER BOAT WORKS INC. **Toms River N. J.**																							
Viking 24........	....	2	....	1	....	Lap	Oak 7	Yellow Pine	Cedar	Copper	Mahogany	Bronze	Red Wing	50	3⅛x5	2000	750	14	16x12	1⅛ Bronze	60	....	Standard
Viking 26........	....	2	1	1	....	Lap	Oak 7	Yellow Pine	Cedar	Copper	Mahogany	Bronze	Gray	60	3⅜x4	2900	660	18	....	1⅛ Bronze	60	40	Standard
Viking 30........	....	4	1	1	....	Lap	Oak 7	Yellow Pine	Cedar	Copper	Mahogany	Bronze	Gray	72	3⅛x4⅝	2900	740	18	....	1⅛ Monel	60	40	Standard
TOPPAN **Medford, Mass.**																							
30 Sea Crest Ex. Cr	1	2–3	1	1	1	Smooth	⅞x1½ Oak 12	Oak	¾ Cedar	Bze. or Galv.	Mahogany	Bronze	Optional	100	....	....	....	20	....	1¼ Bronze	70	Yes	....
32 Llenroc Ex. Cr.	2–3	4–8	1	2–3	1–2	Smooth	1x1½ Oak 6 to 9	Oak	1 Cedar	Bronze	Mahogany	Bronze	Toppan	200	6x6½	1800	1700	32	....	1¼ Bronze or Monel	100	25	....
42 Llenroc Exp. Cr.	2–5	4–10	1	2–4	2–4	Smooth	1¼x1¾ Oak 6 to 12	Oak	1⅛ Cedar	Bronze	Mahogany	Bronze	Toppan	500	....	....	....	40	....	1¾ Bronze or Monel	240	60–100	....
VINYARD **Milford, Del.**																							
Coastwise 50......	2	7	1	2	2	Smooth	2x2 12	5	1¾	Copper	Mahogany	Bronze	Sterling	300	5¼x6	1500	2940	14½	24x16	1⅝ Bronze	260	200	Delco 750-W.
Gulf Stream 55....	3	9	1	3	3	Smooth	2x2 12	5	1⅝	Copper	Mahogany	Bronze	Sterling	300	5¼x6	1500	2940	14½	24x16	1⅝ Bronze	400	200	Kohler 1500-W.
WHITNEY **East Hartford, Con.**																							
[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	Smooth	[illegible]	3 Oak	[illegible] & 1 Mah.	Bronze Bronze	Mahogany Mahogany	Bronze Bronze	Sterling 2 Chrysler	200	....	....	....	20 20	20x12 20x20	[illegible] Bronze 1½ Bronze	150 180	2–80 2–127	....



The 60 H.P. Faybow "Challenger"

THE SMALLEST AND LIGHTEST 6-CYLINDER MARINE ENGINE
OF ITS HIGH POWER. UNEQUALLED FOR PERFORMANCE

Bore 3-3/8″ Stroke 4″ 60 H.P. at 2800 R.P.M. Weight 690 lbs.
Full Pressure Lubrication Joes Reverse Gear Autolite Starting and Ignition System
Champion Spark Plugs Schebler Carbureter Seven-Bearing Crankshaft
Submerged Self-Priming Oil Pump Provision for Tachometer Drive

OTHER FAYBOW MODELS

20 H.P.—Model LN-403 "Gobest"
55 H.P.—Model LC-61
40 H.P.—Model LN-43
60 H.P.—Model LNS-43

100 H.P. "CONQUEROR"

FAYBOW-CONTINENTAL MODELS

40 H.P.—Model L
70 H.P.—Model B
80 H.P.—Model T

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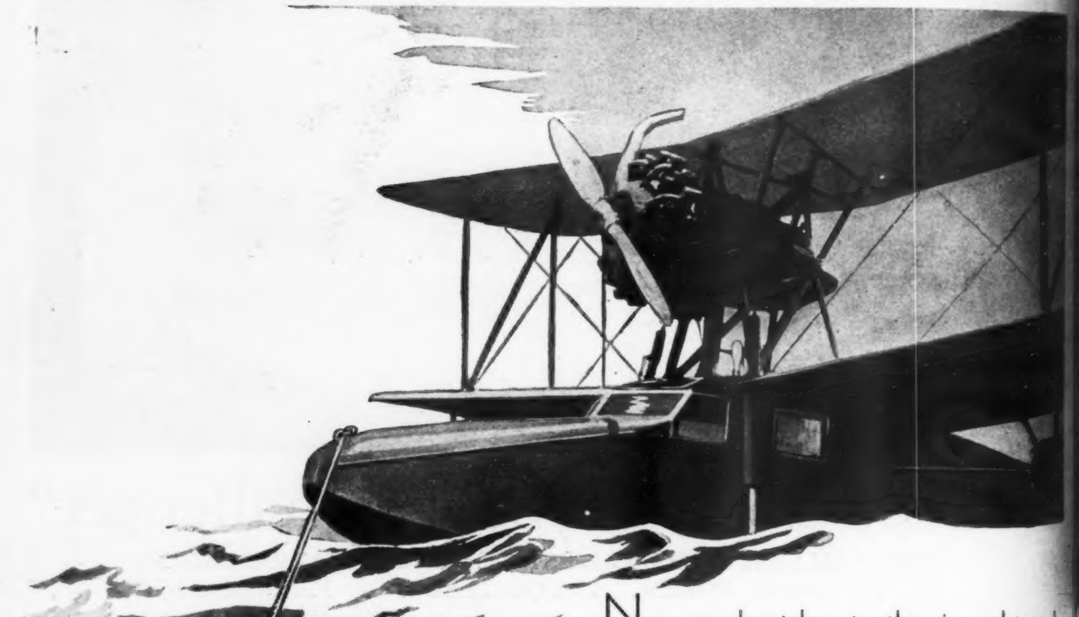
MARINE ENGINES

FAY & BOWEN ENGINE COMPANY
2200 DIAMOND STREET
PHILADELPHIA, PA.

The modern ship rides at anchor with the same rope that held fast the old clipper a century ago » » »



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Now man has taken to the air and travels in an hour a distance which the old clipper considered a good day's sailing . . . many companies and many products have come and gone since that day . . . but Fitler rope, the favorite in the time of the clipper, has only grown in favor through these many years . . . for, today Fitler rope is the standard of quality for yachts, launches, seaplanes and for every craft that floats in sporting waters. If your craft is not equipped with Fitler's First Quality Pure Manila Rope, write for samples and information to the Department of Inquiry...

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PHILADELPHIA CORDAGE WORKS
Philadelphia, Pa.

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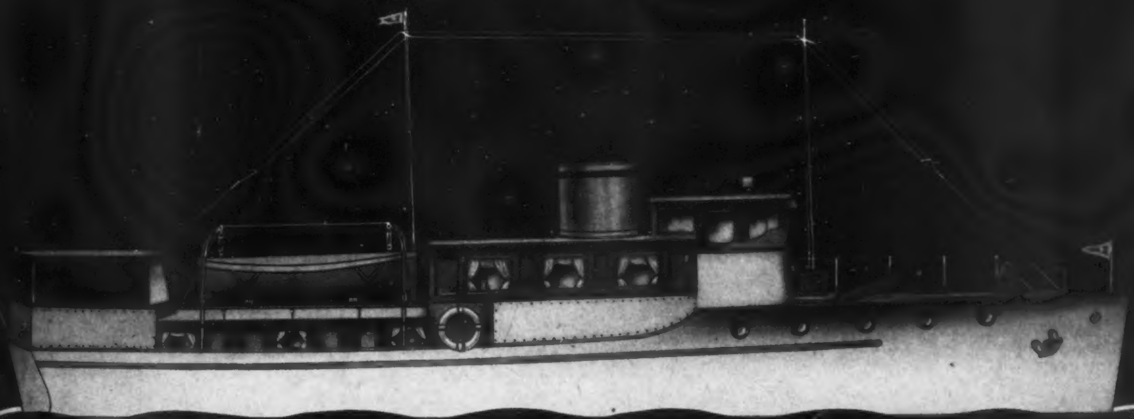
Rope

***Look for the blue and yellow colored yarn**
Trade Mark (Reg. U. S. Pat. Off.)

FIFTY-SIX FOOT
DIESEL POWERED
STEEL CRUISING YACHT



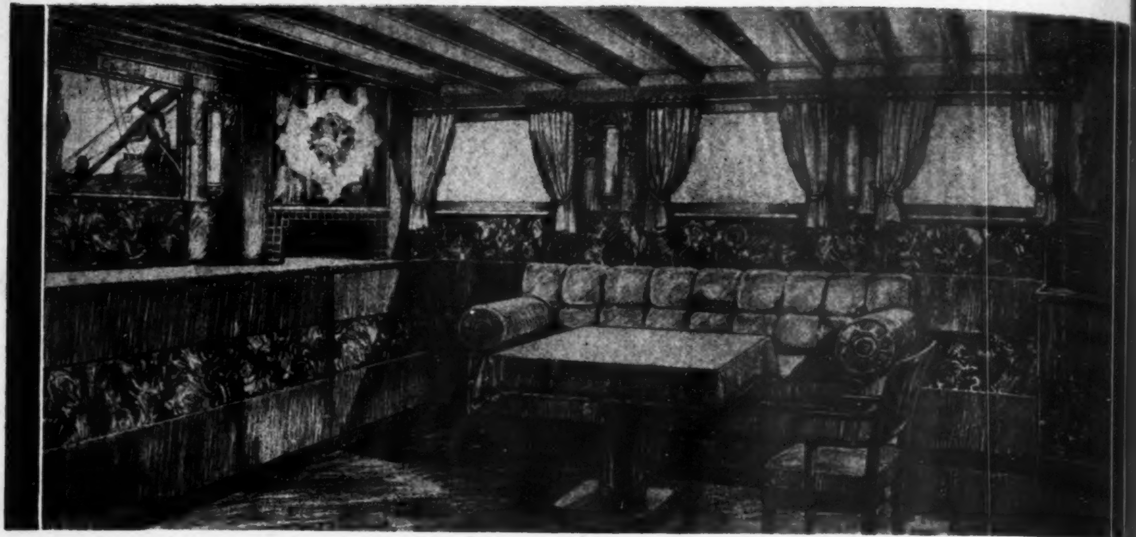
DESIGNED AFTER HULL LINES

OF THE S. S. BREMEN

QUEEN OF THE SEAS

HOLL = CRAFT

Watercraft De Luxe



The main saloon on bridge deck, a masterpiece in craftsmanship, is tastefully decorated and fu ished. Each inlaid rose design on each of the corner lockers is ma of seventeen kinds of rare woods in natural

The Fore-runner of a Luxurious Fleet of Sea-Going Yachts

PRICED AT $37,500 COMPLETE

and delivered at any port on the Atlantic Coast

This yacht as pictured in these pages has been recently delivered to a Boston client and is now cruising in Southern waters.

We are equipped to deliver boats of any size or type according to your particular design.

Duplicates of this yacht can be delivered in time for coming season if ordered in the next few weeks.

THIS is the most extraordinary announcement ever addressed to American yachtsmen who are appreciative of the finer handiwork of master shipwrights. Nowhere in the world will you find a yacht comparable to this fifty-six foot Diesel-powered steel craft—for none has ever been built of a standard adequate for comparison, regardless of price.

Designed by men who have played important roles in the creation of the trans-Atlantic champion S. S. Bremen, it embraces many of the advanced features of naval architecture responsible for the speed and sea-worthiness of this crack liner. For example, it is the first private yacht with a round bow, as used on the Bremen. It is stream-lined to the *nth* degree; even the funnel is egg shaped to reduce resistance.

The hull is built of steel to the exacting specifications of Lloyds, and has [illegible] steel water-tight bulkheads. The fr are placed close together, insuring pe manent rigid construction. The brid deck has a steel bulwark. All exteri joiner work above the steel is teakwo The deck planking is 1½" Moulmein te Fittings, such as hardware, bathroom tures and ports, are of the latest design used on the Bremen. The ports, oper by a crank, swing on a pivot and are adj able inward and outward, acting [illegible] scoops which may be regulated for [illegible] degree of ventilation.

Exterior hardware and all metal [illegible] mings on interior, except on walnut [illegible] are chromium plated.

The owner's stateroom aft is furnished with full twin size removable walnut beds, dresser and chair. The grain in all woodwork is carefully matched and runs vertically.

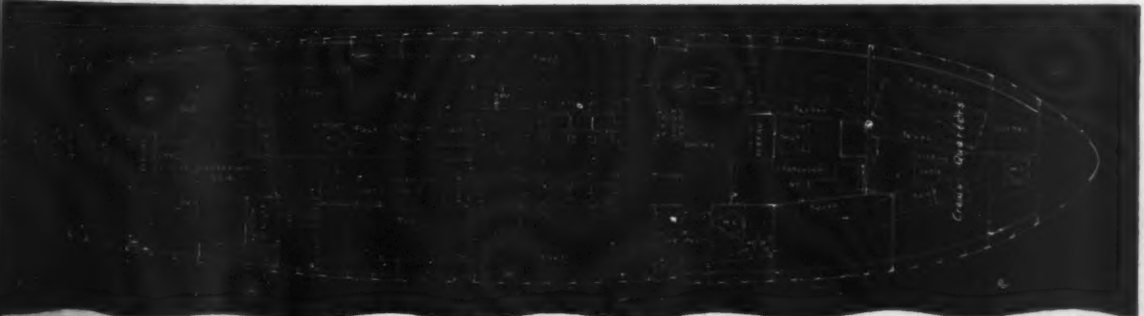
Accommodations on this beautiful yacht are most complete in every detail and radiate with the exotic atmosphere of the continent. There are one double and one convertible single or double staterooms with removable walnut beds and one double stateroom with built-in berths. Each stateroom is individually decorated in harmonizing effects with silk draperies, wall trimmings, tapestry panels, carpets, bedding and furnishings. Additional sleeping accommodations for two can be arranged in the main saloon. Crew's quarters can be arranged for two, three, or four.

The interior finish throughout is characteristic of foreign cabinet work and painstaking care for detail. The main saloon and staterooms are of American walnut. The main saloon has a beamed ceiling and the walls are panelled with alternating plain and burled walnut in satin finish done by a secret process. No varnish, shellac or oil is used, yet a lasting and very high glass-like surface has been obtained which is unaffected by salt water and does not scratch easily.

The galley, forward of the engine room, runs the entire beam of the ship and is finished entirely in durable white enamel and rubber tile flooring. It is fully equipped, including electric refrigeration and Universal gas system for cooking and heating water.

Two especially designed and built 70 H.P. M. A. N. Diesel engines furnish power, giving speed of 16 miles per hour at 900 R. P. M. Fuel capacity is provided for a cruising range of 1800 to 2000 miles. The engine room is insulated from rest of ship with spun glass and cork-lined bulkheads, same insulation as used on the S. S. Bremen.

There are three toilets and wash basins with latest American sanitary equipment, with hot and cold running water to all basins, bath tub and shower. Hot sea water is available for baths. Selective inter-communicating telephone system to all compartments is another feature of this fine yacht. Wireless sending and receiving set in addition to broadcast receiver are standard equipment.



ARRANGEMENT PLAN

This double stateroom amidship can be converted into two single rooms by closing sliding walnut doors

These decided advantages of HOLL-CRAFT result from the careful construction of this steel yacht:

Extremely low insurance rate of three per cent or less
Fuel operating cost of three cents per mile or less
No gasoline danger
Freedom from hull destruction by worms

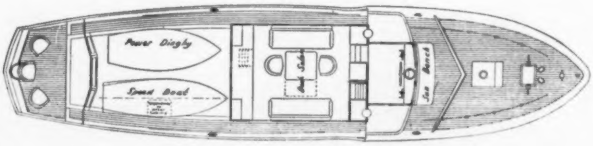
SPECIFICATIONS

Length,	56 feet	*Speed,*	16 miles per hour
Beam,	13 feet	*Fuel Capacity,*	800 gallons
Draft,	4 feet	*Water Capacity,*	500 gallons
Hull,	Steel	*Auxiliary Plant,*	Kohler 32 Volt D. C. Fully Automatic, Operating on Gas
Bulkheads,	Four		
Power,	Two 70 H.P. M. A. N. W-6 V-1218 Diesel Engines, Electric Starting	*Batteries,*	400 Hour Capacity, 12 Volts for Engines and Nautical Lights

EQUIPMENT

ANCHORS AND CHAIN
DOCK LINES
FENDERS
LIFE PRESERVERS
KITCHEN UTENSILS
ELECTRIC REFRIGERATOR
GALLEY GAS STOVE
HOT WATER HEATER
BILGE PUMPS
SIREN (*German Navy Type*)
FIRE EXTINGUISHER
BOSCH HORN
RUNNING LIGHTS
ZEISS SEARCH LIGHT
ELECTRIC CLOCKS *in Each Room*
CONTROL INSTRUMENTS
CHART CASE
COMPASS
SIX OWNER'S FLAGS
BELL
FLAGS
BOARDING LADDER
TOOLS
ONE DINGHY WITH OUTBOARD MOTOR
ONE SPEED BOAT WITH OUTBOARD MOTOR
BEDDING
MATTRESSES
CUSHIONS
UPHOLSTERY
CHAIRS
CHINA (*Service for Twelve*)
SILVERWARE
TABLE LINEN
GLASSWARE

The above is only a partial list of equipment too numerous to mention in this space



The Deck Plan

FOR FURTHER PARTICULARS ADDRESS:

SHIPBUILDING & MOTOR EQUIPMENT, Ltd.
143 Tremont Street
BOSTON MASSACHUSETTS

Detroit
Motorboat and Sportsman Show
SECOND ANNUAL OUTDOOR LIFE EXPOSITION
CONVENTION HALL
MARCH 29-APRIL 5

DETROIT'S leadership as a boating center is undisputed. Now, for the second time it offers a complete and comprehensive boat exhibit. All types of craft, yachting accessories and marine engines will be displayed in Convention Hall, with the exhibits all on the same floor. The show is sponsored by the Marine Industries Association, Inc., and under the management of the men who have successfully operated Detroit's Auto Shows for 16 years.

The Main Sheet will again be the OFFICIAL PROGRAM of the Show. No advance in rates but two and one-half times the normal circulation will be available for this big April issue.

The Main Sheet
5-216 General Motors Building Detroit
W. D. EDENBURN, Editor

A PROVEN PRODUCT FOR IMPROVED PERFORMANCE

Morse Straight-Line Reduction Gears are a tried and proven marine product, accepted by scores of leading boat builders, naval architects and engineers.

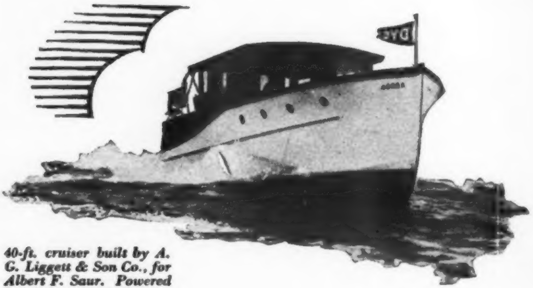
Both from the performance and installation standpoint, they offer a most practical and economical means of transferring engine power to the propeller at the speed at which the propeller is most efficient.

Application is desirable in all cruisers, work boats and auxiliary craft equipped with high speed engines, as well as in slow speed gasoline and Diesel installations. In operating and maintenance economies they will eventually pay for themselves.

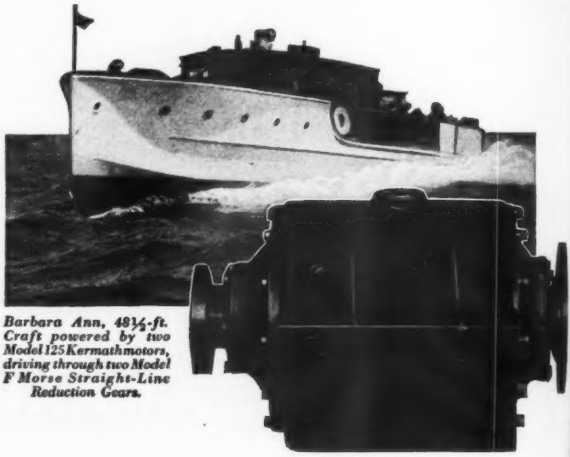
Due to their exclusive internal gear design, the size of the complete unit has been reduced to a minimum. At the same time, installation problems have been greatly simplified. Installation may be made even in boats already in service, without changing the position of engine or propeller.

Write today for full information, including engineering drawings with dimensions. State size and type of engine used.

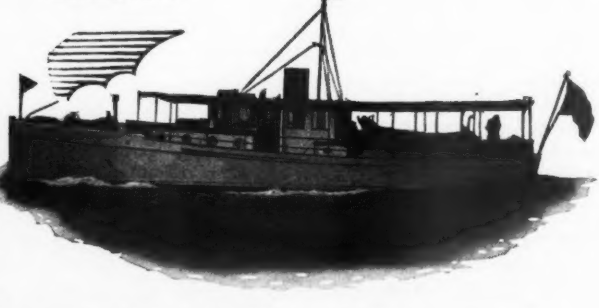
MORSE CHAIN COMPANY
DETROIT MICHIGAN



40-ft. cruiser built by A. G. Liggett & Son Co., for Albert F. Saur. Powered by 150 h. p. Kermath, driving through Model K Morse Straight-Line Reduction Gear.



Barbara Ann, 48½-ft. Craft powered by two Model 125 Kermath motors, driving through two Model F Morse Straight-Line Reduction Gears.

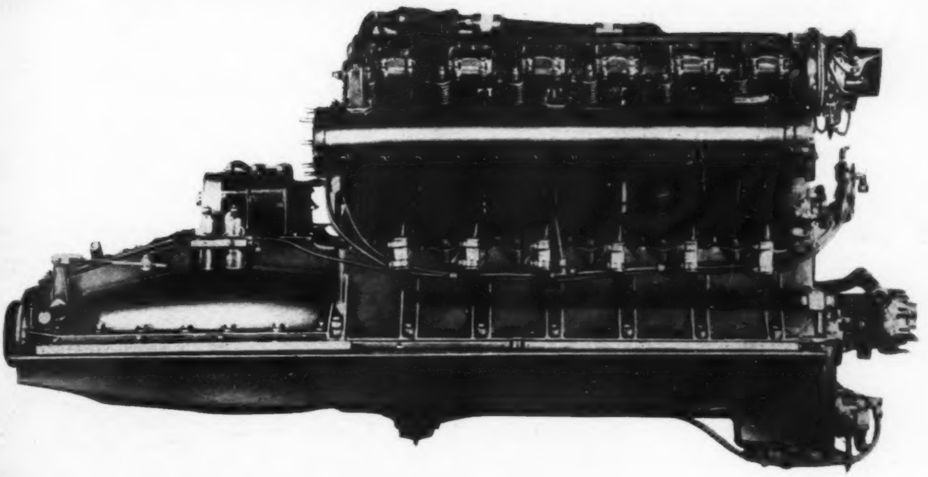


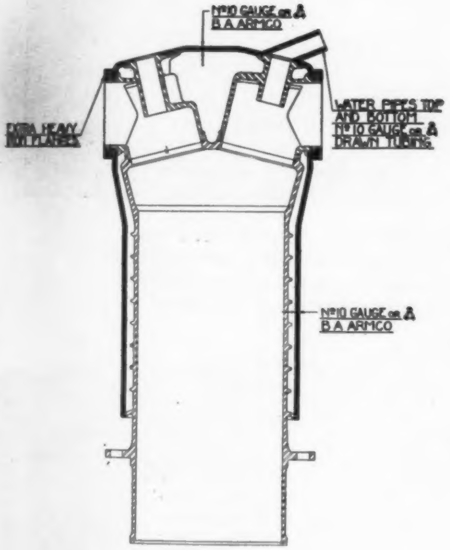
Fearless II, 65-ft. yacht, powered by two Model U Cummins Diesel Engines, driving through two Model F Morse Straight-Line Reduction Gears. Designed by S. S. Crocker, Jr., built by W. J. Reid, owned by E. B. Phillips.

MORSE
STRAIGHT-LINE
REDUCTION GEARS

Advertising index will be found on 5th last page.

VIMALERT
MARINE ENGINES





Fast Enough for the Fastest
Fine Enough for the Finest

THE VIMALERT 400 h.p. twelve cylinder marine engine marks the culmination of years of designing, developing, testing and actual operation under adverse service conditions by leading marine engineers. Every detail of this precision motor has been carefully studied, tried and proven, resulting in a high-speed, high power marine engine that is as perfect as engineering skill can produce. It is an engine fast enough for the fastest, and fine enough for the finest motor craft.

The cylinders are made with heavy 10 Gauge (9/64") Armco salt resisting jackets without sacrifice of power. The clutch and flywheel are entirely enclosed, including starting gears and bendix. The VIMALERT is so designed as to facilitate quick accessibility to all parts. Clutch and starter mechanism can be readily removed without moving engine from bed. Water jacketed cast alloy exhaust manifolds eliminate all hot spots. Water piping, wiring manifolds and miscellaneous steel parts are heavily plated to offset corrosion, as well as to be of a pleasing appearance. Oil, water and gasoline pumps, located in the front of the motor, are easily accessible and removable.

VIMALERT engines are furnished in true right and left rotation for twin installations.

GENERAL SPECIFICATIONS

400 H.P. at 1850 R.P.M.—Guaranteed
Twelve Cylinders. Bore 5". Stroke 7". Weight 1800 Pounds.
Joes Reverse Gear. Robert Bosch Generator. Delco 12-Volt Ignition. 12-Volt Starting Motor.
Alloy Exhaust Manifolds. Steel Cylinders with Armco 10 Gauge (9/64") Jackets.
Geared Fuel, Oil and Water Pumps.

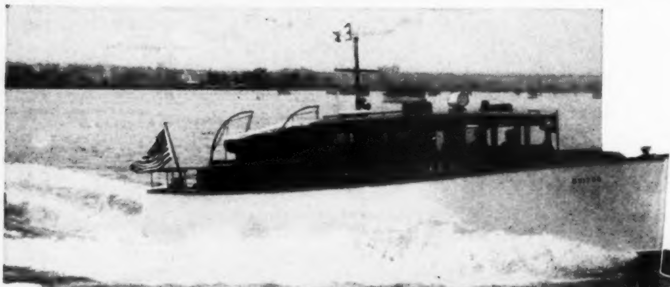
Write today for further information.

THE VIMALERT COMPANY, Ltd.
835 GARFIELD AVENUE JERSEY CITY, N. J.

Where Quality Is Paramount

Woolsey's

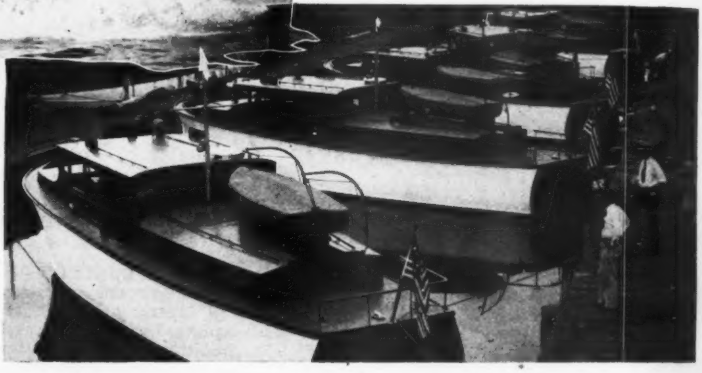
Products Are Used Exclusively



Fairform Flyers, 45 and 54 footers, built by the Huckins Yacht Corp. of Jacksonville, Florida, are protected from keel to mast truck with Woolsey's superior products.

Above: A 45-foot Fairform Flyer clipping off the knots with its smooth Woolsey's Copper "Best" bottom.

Right: A fleet of Woolsey protected Fairform Flyers, awaiting delivery to their owners.



SINCE 1853 Woolsey's Paints and Varnishes have been widely used on all types of craft sailing the seven seas. Today Woolsey's products are used by America's leading builders of standard and custom built boats. If you want the finest in paints and varnishes, insist on Woolsey's and you will save money in the long run.

WOOLSEY'S YACHT WHITE

WOOLSEY'S
YACHT WHITE

For lasting quality, whiteness, and durability Woolsey's Yacht White is unexcelled. Is made in either gloss, semi-gloss or flat finish. It will not crack, blister nor peel. It leaves an ideal surface for repainting.

COPPER "BEST" PAINT

CHAS. A. WOOLSEY
COPPER BEST PAINT
C. A. WOOLSEY PAINT & COLOR

For a smooth sailing bottom and absolute protection against fouling by seaweed, barnacles or boring teredo worm you can use nothing better than Woolsey's Copper "Best" Paint.

TUNGSPAR VARNISH

This specially prepared waterproof marine varnish will not turn white. It is elastic and maintains high and lasting lustre. Unaffected by weather conditions. Tungspar is a quality varnish for particular people.

WOOLSEY'S
TUNGSPAR
VARNISH

Other Woolsey Protective Coatings include: Deck Paints, Glisto White Enamel, Engine Enamels and Iron and Steel Bottom compositions.

Stocks in All Ports.

If your dealer cannot supply you, write us.

C. A. WOOLSEY PAINT & COLOR CO.

JERSEY CITY, NEW JERSEY

TAMPA, FLORIDA. SAN FRANCISCO, CALIFORNIA. HOUSTON, TEXAS.

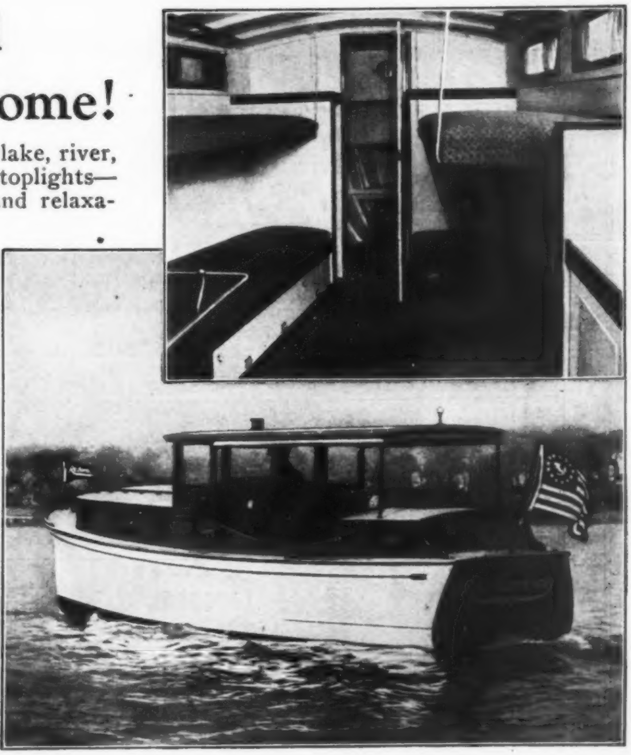
Visit us at Booth 17 at the New York Motor Boat Show

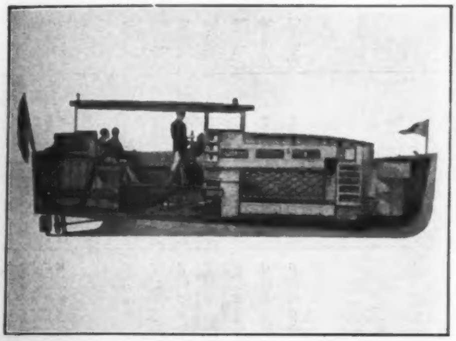
As Convenient and Private as Your Home!

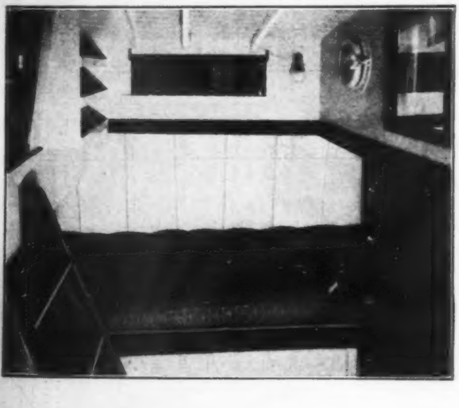
Step on the starter, cast off and away on lake, river, sound or bay. No dust, no traffic jams, no stoplights—nothing but unalloyed pleasure, freedom and relaxation. That's the joy of cruisabouting!

But this Double Cabin Cruisabout is more than a jaunty, glistening motorboat. It is a home afloat with all the conveniences and privacy you enjoy in your home ashore.

The main cabin of this Double Cabin Cruisabout is a living and dining room by day; a comfortable, airy, screened stateroom for four people at night. The cockpit is a veranda with a large, cushioned, comfortable seat where you and your family and guests can spend many happy, restful hours.







The cabin at the stern is your private bedroom. Tucked away in this cabin are two full length spring berths; a dresser with many large drawers and a mirror; hanging shelves for books and a storage behind the cabin stairway for suitcases and airplane trunks.

Never before have the liberal accommodations and the absolute privacy and comfort found aboard the Double Cabin Cruisabout been built into a boat of less than 30 feet and offered for the low price of $4185.

The few moments you spend inspecting this Cruisabout at the Silver Anniversary Motorboat Show or at the following dealers will prove to you that this Cruisabout and her sister ships are unprecedented values in the history of yachting. Free booklet "E-30" mailed on request.

RICHARDSON BOAT COMPANY, INC.
350 Sweeney Street, North Tonawanda, N. Y.

CRUISABOUTS ARE DISPLAYED BY

Bruns-Kimball & Co., 5th Ave. and 15th St., New York City, or 102 So. Fourth St., Philadelphia, Pa.; Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass.; F. D. Homan, 78 Riverside Ave., Amityville, L. I., N. Y.; N. J. Shea, 1424 Lauderdale Ave., Lakewood, Ohio; Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit, Mich.; A. M. Deering, 1454 Builders Bldg., Chicago, Ill.; Volney E. Lacey, Charlotte Station, Rochester, N. Y.; George Bender, Erie Yacht Club, Erie, Pa.; Henry Pohl, Inc., On the Causeway, Miami, Fla.; Electric Supply Co., 210 - 21st St., Galveston, Texas; T. B. F. Benson, 371 Bay St., Toronto, Ont., Canada; C. O. Horstman, 813 So. Washington St., Peoria, Ill.

Richardson
1930 Cruisabouts

STRUCTURAL AND MECHANICAL SPECIFICATIONS OF STANDARDIZED RUNABOUTS, SEDANS AND OPEN BOATS

(Continued from page 360)

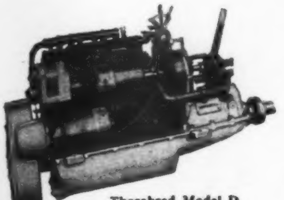
Name or Number of Model	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lution	Weight				Fuel	Water	
DART **Toledo, Ohio**																							
D						Smooth	Oak 10 & 24	Oak	Mahogany	Brs. & Cpr.	Nickel Pl.	Bronze	Chrysler	72				33		⅞	25		
A						Smooth	Oak 10 & 24	Oak	Mahogany	Brs. & Cpr.	Chr. Plated	Bronze	Chrysler	125				37		1 Monel	25		
B						Smooth	Oak 10 & 24	Oak	Mahogany	Brs. & Cpr.	Chr. Plated	Bronze	Kermath	200				42		1¼ Monel	60		
C						Smooth	Oak 10 & 24	Oak	Mahogany	Brs. & Cpr.	Chr. Plated	Bronze	Optional							1⅜ Monel	80		
DEBASCO **Philadelphia, Pa.**																							
17						Batten	⅝ Spruce 20	5 Oak	Dbl. Mah.	Brass	Nickel Silver	Bronze	Universal	45	3¼x4½	3000	425	30	13x13	Bronze	25		
18						Batten	⅝ Spruce 21	5 Oak	Dbl. Mah.	Brass	Nickel Silver	Bronze	Universal	85	3½x4½	3000	635	35		Bronze	25		
DEE-WITE **Detroit, Mich.**																							
2-16 Inboard						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze						20	D. W. S.		10		
3-16 Inboard V. B.						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Van Blerck	25	2¹¹⁄₁₆x3½	2400	275	20	Col. 12-10		10		
4-19 Stan. Inboard						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 437	41	3⅜x4¼	2000	350	20	D. W. S.	1 Bronze	32		
5-19 Stan. Inboard						Batted	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 441	41	3⅜x4¼	2000	425	20	D. W. S.	1 Bronze	32		
6-19 Stan. Inboard						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 444	55	3⅞x4¼	2700	425	28	D. W. S.	1 Bronze	32		
7-19 Stan. Inboard						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 650	55	3⁹⁄₁₆x3⅞	2700	650	28	D. W. S.	1 Bronze	32		
8-19 Stan. Inboard						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 672	72	3⅜x4	2950	650	32	D. W. S.	1 Bronze	32		
9-19 De Luxe Inb'd						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 672	72	3⅜x4	2950	675	32	D. W. S.	1 Bronze	38		
10-19 De Luxe Inb'd						Batten	Oak 24	Oak	Mahogany	Cpr. & Brs.	18% Ni. Sil.	Bronze	Gray 8	140	3⅜x4⅝	3000	1000	40	D. W. S.	1 Bronze	38		
DODGE **New York, N. Y.**																							
1						Batten	¾x2-2½ Oak 16	Fir	⅜ Mah.	Bze. & Brs.	Ma. & Ni. Sil.	Bronze	Lycoming	40	3x3¾	3500		25	10x11	¾ Monel	13		
2						Batten	¾-1¼x2½ Oak 18	Fir	⅝ Mah.	Bze. & Brs.	Ma. & Ni. Sil.	Bronze	Lycoming	115	3¼x4½	3000		35	14x14	1 Monel	35		
3, 4, 10						Batten	⅞-1¼x2½ Oak 20	Fir	⅝ Mah.	Bze. & Brs.	Ma. & Ni. Sil.	Bronze	Lycoming	125	3⅜x4½	3000		32	15x14	1⅛ Monel	42		
														165	3⅞x4⅞	3000		38	17x20				
5, 6, 11						Batted	⅞-1¼x2½ Oak 19	Fir	⅝ Mah.	Bze. & Brs.	Bronze	Bronze	Lycoming	165	3⅞x4¾			32	17x20	1¼ Monel	84		
														300	4½x4½	3000		45	19x26				
DOWN EASTER **Camden, Me.**																							
Down Easter						Batten	⅞x2 Oak	1¾x4 Pine	⅝ Mah.	Brs. & Bze.	Mahogany	Bronze	Gray	40	3⁹⁄₁₆x3⅞	2600	540	25	13x13	1 Bronze	25		
													Gray	60	3⅜x4	2600	570	28	13x14	1 Bronze			
													Gray	72	3⅜x4⅝	2600	640	33	13x14	1 Bronze			
													Universal	43	3¼x4½	2500	425	25	13x14	1 Bronze			
													Universal	85	3½x4½	2600	635	35	13x15	1 Bronze			
DYER MOT. CRAFT **East Greenwich, R. I.**																							
21 Runabout						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional	135				38		Bronze	37		
21 Sedan						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37		
21 Yacht Tender						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37		
26 Runabout						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37		
26 Sedan						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37		
26 Yacht Tender						Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37		
26 Fisherman		2	Yes	Yes	Yes	Smooth	Mahogany	Oak	Dbl. Diag. Outside Mah.	Brs. & Cpr.	Mahogany	Bronze	Optional							Bronze	37	20	
HACKER **Mt. Clemens, Mich.**																							
27						Batten	⅞x3 Oak 26	1¾x3¾ Oak	Dble Mah	Bze. & Cpr.	Nickel Silver	Bronze	Gray	125	3⅜x4¼	3000	830	35	15x15	Monel 1	35		
26						Batten	⅞x3 Oak 22	1⅞x3⅞ Oak	Dble Mah.	Bze. & Cpr.	Nickel Silver	Bronze	Kermath	200	5x6½	2500	1400	43	18x24	Monel 1½	60		
30						Batten	⅞x3 Oak 25	1⅞x3⅞ Oak	Dble Mah.	Bze. & Cpr.	Nickel Silver	Bronze	Kermath	200	5x6½	2500	1400	41	18x24	Monel 1½	70		
38		4	1	1		Batten	Oak	Oak	Dble Mah.	Bze. & Cpr.	Chr Plated	Bronze	2 Kermath	200 ea.	5x6½	2500	1400	42	18x24	Monel 1½	180		

(Continued on page 466)

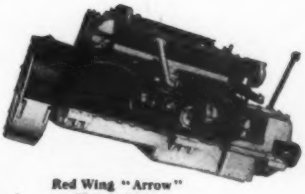
RED WING MARINE MOTORS

The WARRIOR Six $495

WITH ELECTRIC STARTER



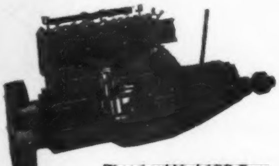
Thorobred Model D
Light weight, high speed
4-cyl.—10-14 h. p.
Ideal for runabouts, yacht tenders, fishing boats or auxiliaries.



Red Wing "Arrow"
High-speed type
6-cyl.—40-80 h. p.
Powerful and delightfully smooth. A favorite for fast runabouts.

A sensation at the Show, same as it has been the whole past season in hundreds of runabouts and cruisers. To see the "Warrior" Six is to marvel at the astonishing low price for so much honest-to-goodness value. Quantity production did it. An assured success for 1930.

30 to 50 h. p. Bore 3⅛" Stroke 5"
(Piston displacement, 230 cubic inches)



Thorobred Model BB-Four
Medium duty type
4-cyl.—40-50 h. p.
Rugged and reliable power for cruiser, commercial boat or large auxiliary.

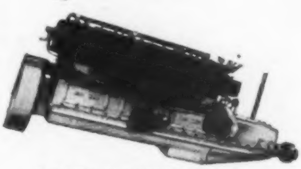
Red Wing "Little Chief"
Medium duty type
6-cyl.—60-85 h. p.
Nothing finer for cruiser or passenger craft. Smooth running, powerful and lasting.

DEPENDABLE *for* 30 YEARS

Since 1900, Red Wing motors have been building their world-wide reputation for reliability and rugged endurance. In runabouts, cruisers, work-boats, auxiliaries—they have done their work efficiently and unfailingly.

And it's worth a lot when emergencies arise to know that your Red Wing THOROBRED motor has the stamina and reserve power to pull you through.

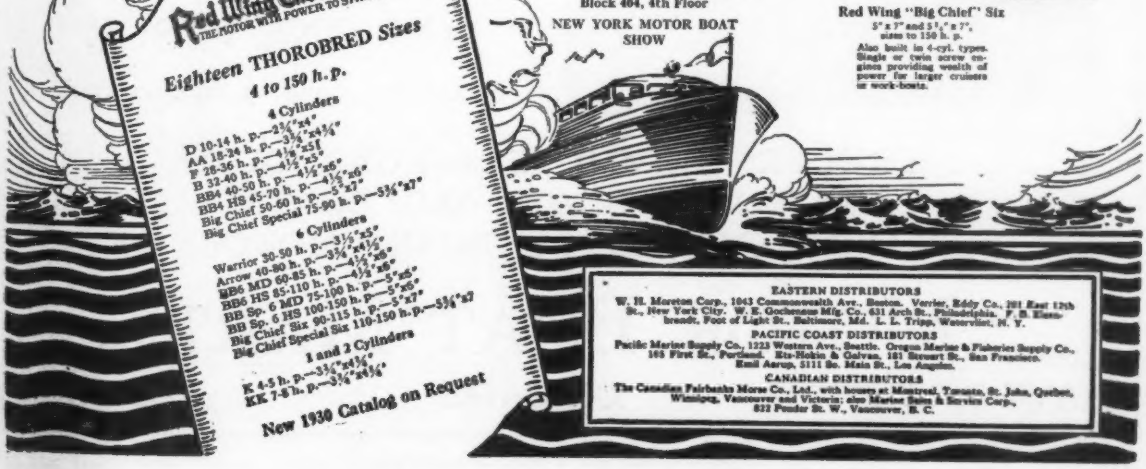
Make any comparisons you wish. All Red Wings provide the utmost in modern design and approved marine features, plus the inherent soundness proved through 30 years of service. They are safe motors for you to recommend.



Red Wing "Big Chief" Six
5" x 7" and 5⅜" x 7", sizes to 150 h. p.
Also built in 4-cyl. types. Single or twin screw engines providing wealth of power for larger cruisers or work-boats.

RED WING MOTOR CO.
RED WING, MINN., U. S. A.

Complete Red Wing Display
Block 404, 4th Floor
NEW YORK MOTOR BOAT SHOW



Red Wing Thorobred
THE MOTOR WITH POWER TO SPARE

Eighteen THOROBRED Sizes
4 to 150 h. p.

4 Cylinders
D 10-14 h. p.—2¾"x4"
AA 18-24 h. p.—3¾"x4¾"
F 28-36 h. p.—4⅛"x5½"
B 32-40 h. p.—4½"x5"
BB4 40-50 h. p.—4½"x6"
BB4 HS 45-70 h. p.—4½"x6"
Big Chief 50-60 h. p.—5"x7"
Big Chief Special 75-90 h. p.—5⅜"x7"

6 Cylinders
Warrior 30-50 h. p.—3⅛"x5"
Arrow 40-80 h. p.—3¾"x4½"
BB6 MD 60-85 h. p.—4½"x6"
BB6 HS 85-110 h. p.—4½"x6"
BB Sp. 6 MD 75-100 h. p.—5"x6"
BB Sp. 6 HS 100-150 h. p.—5"x6"
Big Chief Six 90-115 h. p.—5"x7"
Big Chief Special Six 110-150 h. p.—5⅜"x7

1 and 2 Cylinders
K 4-5 h. p.—3¾"x4⅜"
KK 7-8 h. p.—3¾"x4⅜"

New 1930 Catalog on Request

EASTERN DISTRIBUTORS
W. H. Moreton Corp., 1043 Commonwealth Ave., Boston. Verrier, Eddy Co., 201 East 12th St., New York City. W. E. Gochenaur Mfg. Co., 631 Arch St., Philadelphia. F. B. Ehrenbrandt, Foot of Light St., Baltimore, Md. L. L. Tripp, Watervliet, N. Y.

PACIFIC COAST DISTRIBUTORS
Pacific Marine Supply Co., 1223 Western Ave., Seattle. Oregon Marine & Fisheries Supply Co., 105 First St., Portland. Ets-Hokin & Galvan, 181 Steuart St., San Francisco. Emil Aarup, 5111 So. Main St., Los Angeles.

CANADIAN DISTRIBUTORS
The Canadian Fairbanks Morse Co., Ltd., with houses at Montreal, Toronto, St. John, Quebec, Winnipeg, Vancouver and Victoria; also Marine Sales & Service Corp., 832 Pender St. W., Vancouver, B. C.

A *Permanent National* MOTOR BOAT SHOW at CHICAGO—Open All Year

MOTOR BOAT MART

Sanctioned by
Members of
National Association of
Boat and Engine Manufacturers
140 Thousand Square Feet
of
Marine Displays
ON ONE FLOOR
2200 Feet Long *by* 66 Feet Wide

CRUISERS—COMMUTERS—RUNABOUTS
OUTBOARD BOATS—SAIL BOATS
MARINE ENGINES—OUTBOARD MOTORS

MOTOR BOAT MART

NAVY PIER CHICAGO ILLINOIS

The yacht "Sinbad," owned by Captain E. H. Blade of New York, was fueled with Socony Gasoline before her recent trip to Florida for the winter season.

For the Largest YACHT and the Tiniest OUTBOARD

There's a Socony fuel and lubricant.

Going to the

MOTOR BOAT SHOW?

If you plan to be among those present at the Motor Boat Show held January 17th—25th at the Grand Central Palace in New York City, visit the Socony exhibit. Our representatives will gladly discuss your fuel and lubricating problems with you.

WHATEVER kind of boat *you* have, *we* have the proper fuel and lubricating oil for it. The line of Socony products covers the complete range of water craft, from the tiniest of outboards to the largest of yachts. If your boat uses gasoline and motor oil, we recommend Socony Special plus Ethyl and the proper grade of Socony Aircraft Oil. If she's Diesel-powered, she'll run best on Socony Diesel Fuel Oil, with Socony Turex Oil as a lubricant. For your convenience, Socony marine stations are located at all the important points in New York and New England.

SOCONY

Diesel Fuel Oil · Turex Oil · Gasoline · Motor Oil · Special Gasoline *plus* Ethyl · Aircraft Oil

STANDARD OIL COMPANY OF NEW YORK

LEADING DIESEL ENGINES

(*Continued from page* 151)

MODEL	Horse Power	Bore and Stroke	No. of Cyls.	R.P.M.	Weight	*Lubrication Method	*Reverse Gear	*Starting Device
TREIBER (Continued) **Camden, N. J.**								
ER-12	450	7½ x 9½	12-V	900	6000	Pr	Plan. Mult. Disc	El
E	225	7½ x 9½	6	900	4500	Pr	Rev	Air
F	300	8½ x 11	6	700	7500	Pr	Rev	Air
G	325	9½ x 12	6	700	10000	Pr	Rev	Air
H	500	10½ x 13	6	700	14000	Pr	Rev	Air
I	600	11½ x 14	6	650	16500	Pr	Rev	Air
K	700	12½ x 15	6	600	19000	Pr	Rev	Air
L	1500	16 x 18	6	700	45000	Pr	Rev	Air
FV	600	8½ x 11	12-V	750	10500	Pr	Rev	Air
GV	750	9½ x 12	12-V	700	17600	Pr	Rev	Air
HV	1000	10½ x 13	12-V	700	20000	Pr	Rev	Air
IV	1200	11½ x 14	12-V	650	24000	Pr	Rev	Air
KV	1400	12½ x 15	12-V	600	27000	Pr	Rev	Air
MV	3000	16 x 16	12-V	700	63200	Pr	Rev	Air
WINTON (Airless Injection) **Cleveland, Ohio**								
144-3	75	7 x 8½	3	750	3350	Pr	Own	Air
144-4	100	7 x 8½	4	750	4500	Pr	Own	Air
144-6	150	7 x 8½	6	750	5700	Pr	Own	Air
138-6	225	8 x 10	6	700	7340	Pr	Dir Rev	Air
138-8	300	8 x 10	8	700	9000	Pr	Dir Rev	Air
141-6	175	8½ x 11	6	450	10000	Pr	Dir Rev	Air
155-6	300	7½ x 12	6	700	9000	Pr	Dir Rev	Air
152-8	400	8½ x 12	8	700	12000	Pr	Dir Rev	Air
133-6	275	10 x 14	6	400	20700	Pr	Dir Rev	Air
133-8	365	10 x 14	8	400	27000	Pr	Dir Rev	Air
149-6	375	11 x 15	6	450	33500	Pr	Dir Rev	Air
149-8	500	11 x 15	8	450	29500	Pr	Dir Rev	Air
158-6	600	14 x 16	6	450	43000	Pr	Dir Rev	Air
158-8	800	14 x 16	8	450	55000	Pr	Dir Rev	Air
163-6	430	14 x 18	6	275	60000	Pr	Dir Rev	Air
163-8	570	14 x 18	8	275	75000	Pr	Dir Rev	Air
157-6	800	16½ x 26	6	250	105000	Pr	Dir Rev	Air
157-8	1100	16½ x 26	8	250	135000	Pr	Dir Rev	Air
164-6	500	14½ x 21	6	250	65000	Pr	Dir Rev	Air
164-8	650	14½ x 21	8	250	82000	Pr	Dir Rev	Air
165-12	500	8 x 10	12	750	15000	Pr	Dir Rev	Air
165-16	650	8 x 10	16	750	18000	Pr	Dir Rev	Air
WINTON (Air Injection) **Cleveland, Ohio**								
114G	150	8 x 11	6	450	13500	Pr	Own	Air
114	150	8 x 11	6	450	13000	Pr	Dir Rev	Air
117	175	8½ x 11	6	450	13000	Pr	Dir Rev	Air
111	200	9½ x 14	6	350	21000	Pr	Dir Rev	Air
116	300	10 x 14	6	450	21000	Pr	Dir Rev	Air
121	400	14 x 18	6	250	67000	Pr	Dir Rev	Air
145	430	14 x 18	6	275	50000	Pr	Dir Rev	Air
115A	600	14 x 16	6	450	40000	Pr	Dir Rev	Air
115A-8	800	14 x 16	8	450	56000	Pr	Dir Rev	Air
125	800	16½ x 22	6	300	110000	Pr	Dir Rev	Air
128	800	16½ x 26	6	250	110000	Pr	Dir Rev	Air
128-8	1000	16½ x 26	8	250	140000	Pr	Dir Rev	Air
128A-6	850	17 x 26	6	250	120000	Pr	Dir Rev	Air
128A-8	1100	17 x 26	8	250	160000	Pr	Dir Rev	Air

***KEY TO SYMBOLS**

El.—Electric Pr.—Pressure Rev.—Reversible

ANOTHER STANDARDIZED MOTOR CRUISER

A new 42-foot stock cruiser is in production in the form of a double cabin bridge deck craft designed by the New York firm of Millard, Brewster and Chambers, and built in the Essex, Connecticut yard of the Dauntless Ship Yard, Inc. The new craft is to be known as the Dauntless cruiser and was designed as a small boat not too bulky to be handled without a paid hand, but with adequate living quarters for one, should the owner desire. Substantial construction is the keynote in Dauntless construction with great stress laid on quality of lumber, beauty of joiner work, reliability of power plant, excellence of fittings, etc.

LYCOMING TO BUILD COMPLETE LINE

Entrance of Lycoming into the marine engine field in a large way was seen here today with the announcement of the company of a complete line of marine engines.

The new line will include fours, sixes, eights and twelves, according to W. H. Beal, vice-president, and will range in horsepower from 40 to 300. The entire line is built for high speed boats, runabouts, commuters and express cruisers.

The Dodge Motor Boat Company of Detroit, one of the largest motor boat builders in the world, has already placed orders for 3,000 of these engines and will use the Lycoming marine power plants exclusively in its 1930 boats. This is the largest marine engine order ever placed by a boat company, the Lycoming executive pointed out.

"Lycoming is offering the public in 1930 an inexpensive marine engine with complete equipment and with all the conveniences and advancements of larger engines," Beal said. "Our U-A, 40 h.p. four-cylinder engine is equipped with electric starter and generator, improved oil cooler, fuel pump, carbureter, tachometer take-off, thermo gauge connection and numerous other advancements made available to the public for the first time in a low-priced engine.

"We believe that further development of the marine engine field depends on providing boat owners with the conveniences to which they are accustomed in their motor cars and at a price commensurate with values."

The full Lycoming line of marine engines for 1930 includes the U-A, 3⅛ x 3⅞, four-cylinder, 40 h.p.; U-C, 3⅜ x 4½, straight-eight, 122 h.p.; U-E, 3¼ x 4¾, straight-eight, 160 h.p.; U-F, 4⅝ x 5, twelve-cylinder V type, 300 h.p.

CRAGSTON DEVELOPING RAPIDLY

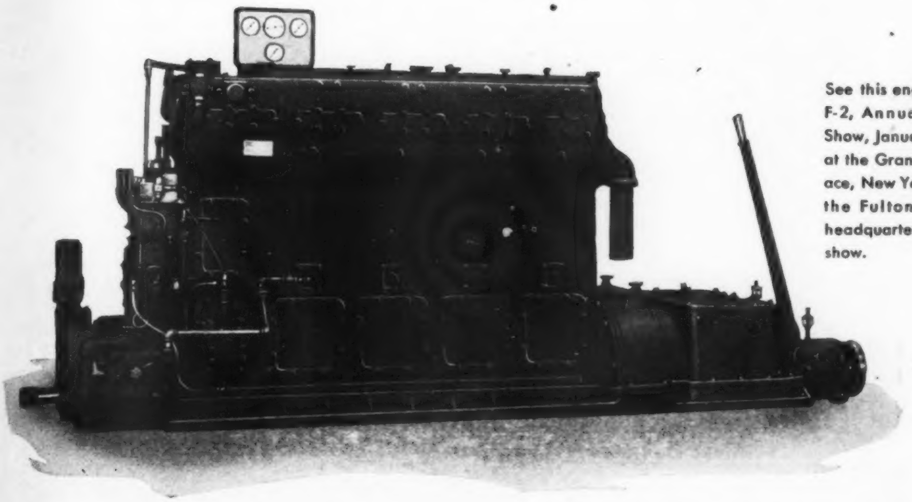
Reports on the development of plans in connection with the newly formed Cragston Yacht and Country Club indicate a remarkable and most encouraging progress. Applications for membership are being filed at a rate far beyond original expectations. The 100 mark has long since been passed and the membership is fast approaching the 200 figure. Membership in the Cragston Club includes prominent representatives of various social circles, as well as heads of large organizations representative in the business world. It is interesting to note that 40% of the members at the present time are either bankers or brokers.

A marine landing has been established at 97th Street and the Hudson River for passengers of both seaplanes and speed boats. Additional landings at Peekskill and Yonkers are proposed to accommodate the Westchester membership. The Peekskill landing will operate in conjunction with the New York Central Railroad and fast boats will keep a regular time schedule with trains.

Possibilities for the development of facilities for a seaplane landing have been investigated by Clarence Chamberlin and the situation analyzed with regard to the establishment of a landing field as well. Work on the buildings will go forward in the near future.

Advertising index will be found on 5th last page

SATISFACTION

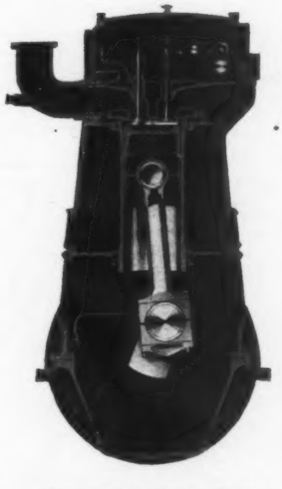


See this engine at booth F-2, Annual Motorboat Show, January 17th to 25th at the Grand Central Palace, New York City. Make the Fulton Booth your headquarters during the show.

... in presenting a complete line of advanced fulton marine diesels of PROVEN dependability

today, after two years of exhaustive shop and laboratory tests, under the most severe conditions, this new, complete line of Fulton-Marine-Diesels is ready for the marine trade.

These tests have proved the excellence of the product—and today these engines are satisfying their users with the advantages and economies of a scientifically designed and constructed Diesel, built by one of America's pioneer engine builders. Sizes from 3 to 8 cylinders, 100 to 300 H. P. Other Fulton Diesels to 2000 H. P. . . . Fulton Iron Works Company, Saint Louis, Missouri, U. S. A.



Cross section of the Fulton Marine Diesel showing sturdy, rigid frame and unusual simplicity of construction.

SUCCESSFUL ENGINE BUILDERS FOR OVER SEVENTY-FIVE YEARS

Win the Early Regattas
IN A
"UTE"
The All-Weather Utility Suit
(Patent Pending)
KEEPS YOU DRY and WARM
Worn by Famous Outboard Racers Everywhere

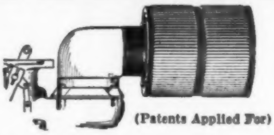
One-piece Waterproof and Windproof of double texture cloth with rubber vulcanized in between. Famous Rustproof Hookless Talon Fastener at front and sides of legs. Waterproof elastic at wrist, ankles and waist. Small spat to cover shoe. Easily put on — weighs but 36 oz. Detachable Hood.

Khaki Color—$12.50
White Color—$16.50

Come in and let us fit you to a UTE, or send us your check and measurements and we will ship you a UTE postpaid. Sizes—Small, Medium & Large. Extra Large 10% extra.

Live dealers should write for Willis' discounts

OBERDORFER PUMPS



(Patents Applied For)

Oberdorfer Back Fire Trap
An Underwriters' approved safety device. It prevents fire caused by backfire explosions. Fits on air horn of carburetor.

For every marine use. Master and Improved Model "B" Automatic Electric Bilge Pumps; Hand Bilge Pumps; Motor Driven Pumps and Bronze Gear Circulating Pumps.

RECOMMENDED
E.J. W
EQUIPMENT
85 Chambers St.
NE YOR

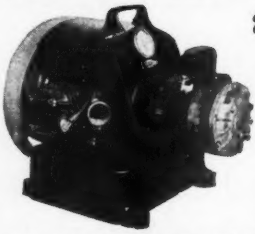
STURGES

New ? ? ?
Equipment

Besides the STURGES ANCHOR HOISTS and Outboard Motor Hoists we will display at our booth Nos. 77-82, third floor, Two New Devices manufactured by the *Sturges Anchor Hoist* which the motor boating public has long wanted. Don't fail to call on us and inspect them.

STURGES

BRANFORD LIGHTING PLANT and Battery Charger



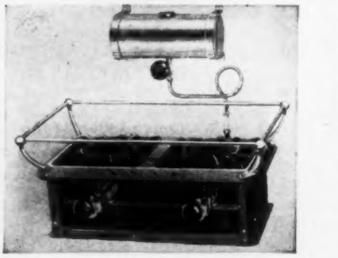
Magneto Ignition, Air Cooled, Gasoline Tank in Base, Full Muffled, Rope Starting, Space occupied 12 in. x 18 in. x 12 in. high. Price complete, 6 volt $140

12 volt system $145

Gives you at all times a reliable, independent source of electricity and enables you to keep your starting batteries fully charged.

All Your Lights Electric and Safe at Little Cost

"Wilco" Alcohol Stove
in Dark Blue Baked Enamel



Standard Equipment on A.C.F., Matthews, Chris-Craft, Richardson and other fine boats.

Height, overall 10¼ inches
Length, overall 20½ inches
Width, overall 15¾ inches
PRICE, $28.00

Also furnished with three burners, price $40.00.

for 40 years
KUHLS'
FOR THE HULL
KUHLS

SANDS

PLUMBING FIXTURES

THIS FOLDING LAVATORY

saves space and is very attractive. Projects only 5½ in. when closed, 18½ in. when open. Height 19½ in., width 15 in., diameter of basin 10 in. Oak or mahogany finish frame with nickel plated copper lining. Nickel plated brass pump with swing supply faucet.

Come in and examine this and other Sands Lavatories, Water Closets and Plumbing Fixtures.

AND SOLD BY

LIS CO.

HEADQUARTERS

EW YORK 67 Reade St.

PERKO PRODUCTS

A few of the many specialties that have made "Perko" a guarantee of superior service and up-to-date design:

Bells
Buoys
Whistles
Ventilators
Dome Lights
Marine Hardware
Electric Pole Lights
Mahogany Flag Poles
Bilge Pumps and Galley Pumps
Outboard & Inboard Equipment
Deck Sockets and Plugs
Searchlights
Specialties
Binnacles
Lighting Fixtures
Running Lights
Bronze Lights

The new "Perko" Streamline Outboard Combination Light, with patented re-bulbing feature

---

Ask your Boat Builder what HE thinks of

Kirby Paints

KIRBY'S
BROWN
OLD STYLE
COPPER PAINT

He knows that they are the lowest priced reliable paints obtainable.

Copper Bottom Paints, Flat Yacht White, Gloss Warship Gray, Gloss Deck Paints, and Holland Enamel always in stock.

Famous with Three Generations of Yachtsmen

GUARD AGAINST FIRES AND EXPLOSIONS

by installing the

"WILCO"

Ventilating System

Expels dangerous, nauseating gasolene vapor from engine room and bilge, and keeps the galley and cabins cool and sweet.

Requires little current, and can be mounted through deck, or cabin top.

Write for descriptive circular

KAPO Safety Coat

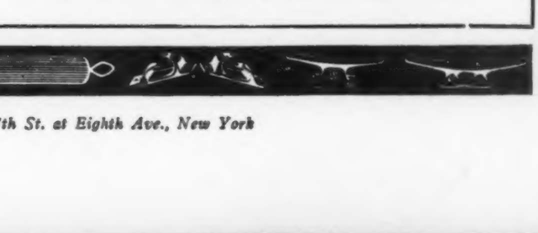
you can't sink

Made especially for the motor boat trade and wherever a life preserver is required that will fit snugly to the body, permitting a coat to be worn over it. Made in four sizes; cover is khaki, strongly sewed and well finished. Filling is kapok, a silky downy vegetable fibre of exceptional life and resiliency, absolutely non-absorbent and its buoyance is 25 to 1 or six times greater than cork.

Size Nos.	Chest, Inches	Price
1	24 to 30	$6.00
2	32 to 36	6.50
3	38 to 42	7.00
4	44 to 48	8.00

MAXIM SILENCERS

FOR EVERY MARINE SERVICE



MR. F. C. KAINER
PRESIDENT

MR. F. T. KAINER
SECRETARY & TREASURER

MR. J. A. KAINER
VICE-PRESIDENT

MR. HUBBARD H. ERICKSON
VICE-PRESIDENT

KAINER & CO.—pioneer manufacturers of accessories for boats have never endeavored to make or sell a complete line of marine hardware or equipment, but have specialized in the manufacture of equipment of their own design.

In the development of Kainer Marine Specialties, many boat builders have been consulted—their requirements studied—their ideas embodied—and as a result this dependable line meets their exacting demands completely—not only from the standpoint of quality, but popular price as well.

The Kainer line of boat steering equipment is strictly marine and not of automotive type conversion. Manufactured of non-corrosive metals, these steering devices will withstand the severest service and maintain their handsome appearance for the life of the boat in which they are installed.

Boat builders everywhere know of this substantial in-built quality and beauty, and are standardizing on Kainer Marine specialties.

Note: To Dealers and Jobbers

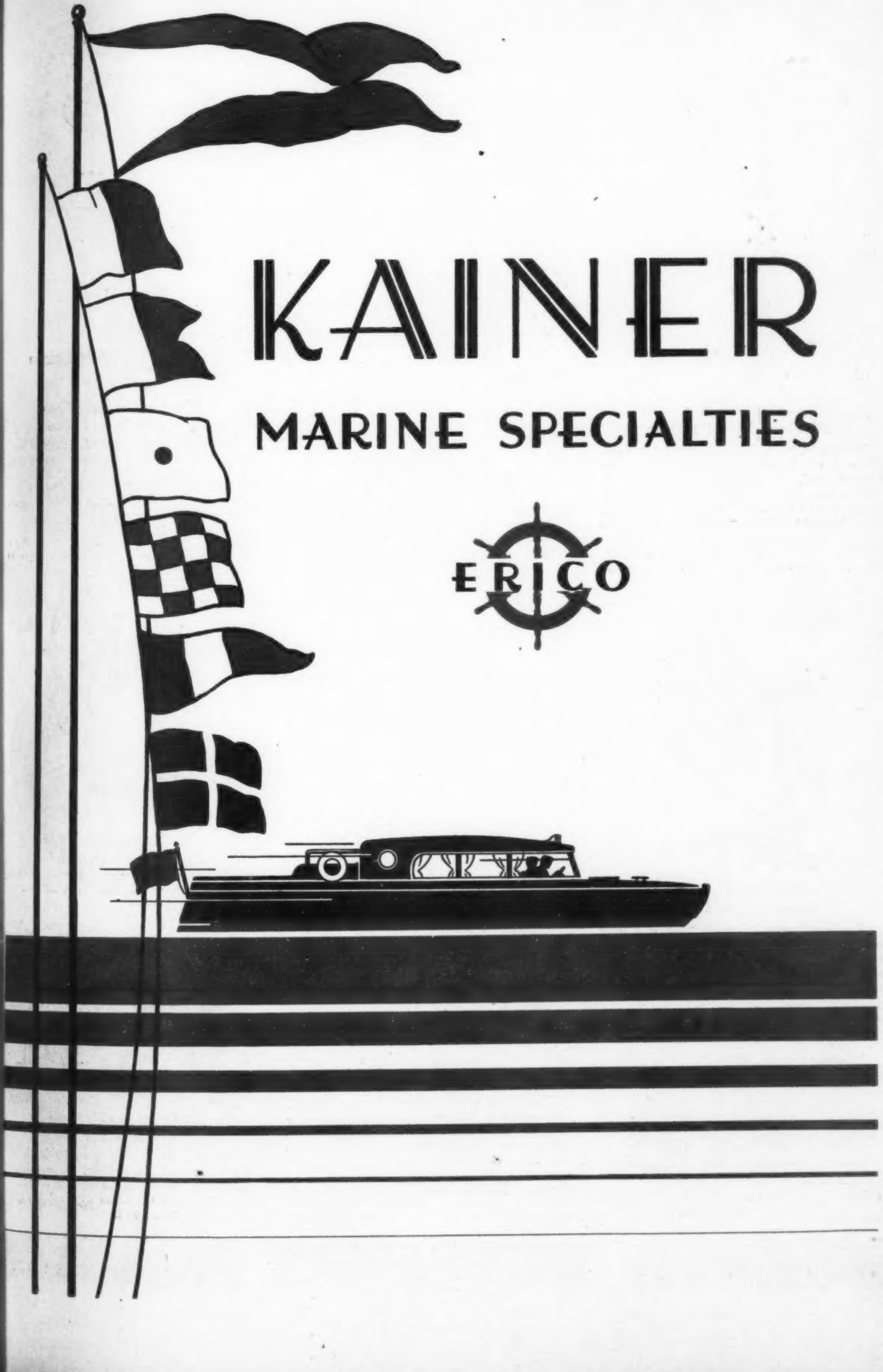
The Kainer Marine line is advertised not only nationally but internationally in magazines covering this field.

We are prepared to serve all foreign trade through our export office. Communications from foreign countries should be addressed to our export representatives.

BERNERD CARLIN ORGANIZATION
Export Counsellors
332 S. Michigan Avenue
CHICAGO, U. S. A.

KAINER & COMPANY
CHICAGO

Office and Factory
761-771 Mather Street
CHICAGO, ILL.



KAINER

MARINE SPECIALTIES

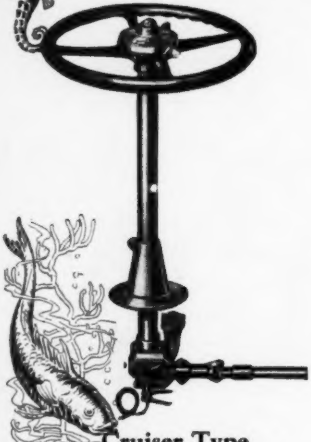
ERICO

KAINER ROPELESS STEERING GEARS

The new De Luxe line of KAINER Ropeless Steering Gears now includes a specially prepared genuine HUSTED Safety Steering Wheel as standard design.

The Husted wheel is of highest quality hard rubber, on one piece, cold rolled, steel core. It is impervious to acids, alkalies, oils, greases, etc., and will withstand the shocks and strains of the most severe service. It will maintain its beautiful jet black color under all conditions. Of the two million steering wheels of this type now in use, not one has ever failed or broken.

KAINER Ropeless Steering Gears are made entirely of bronze except the quadrant section and intermediate gearing. Latest type bronze spark and throttle controls and calibrated dial. Cut gears throughout.

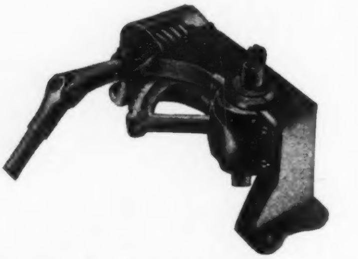


Cruiser Type

Chromium Plated Bronze

Equipped with Husted Safety Wheel. All exposed bronze parts, including calibrated dial, controls and horn button, chromium plated. For runabouts and cruisers up to 35 feet. This gear furnished with Model A quadrant section included.

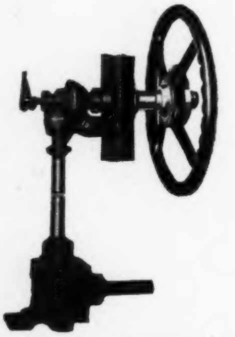
Diam. Wheel	*Height Deck to Wheel*	*Stock No.*	*Price*
18 in.	36 in.	9009	$65.00



Quadrant Section

Model A

Weight, 20 lbs. Length of base, 14 in. Width when segment is hard over, 8 in. Height, 5½ in. Can be bored for rudder stock, 1 in. to 1½ in. diam. Furnished with models 9001, 9009 and 9005.



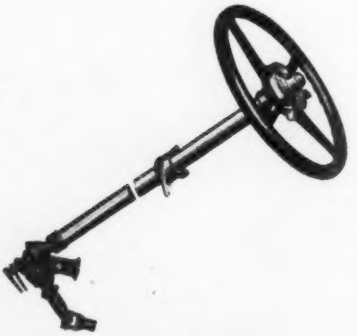
Bulkhead Type

Chromium Plated Bronze

Equipped with Husted Rubber Wheel and Spider. Exposed bronze parts, including dial, controls and horn button, chromium plated. For runabouts and cruisers up to 35 feet.

Diam. Wheel	*Distance Bulkhead*	*Stock No.*	*Price*
18 in.	6 in.	9005	$65.00

Chris-Craft 38-foot Express Cruiser, Kainer Equipped

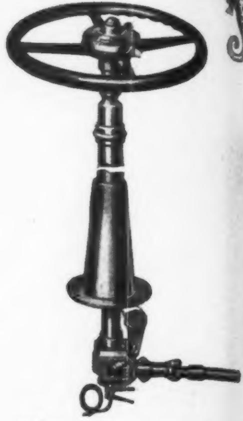


Runabout Type

Chromium Plated Bronze

Equipped with Husted Safety Wheel. All exposed bronze parts including calibrated dial, horn button and controls Chromium plated. Suitable for runabouts or cruisers up to 35 feet.

Diam. Wheel	*Column Length Bulkhead to Wheel*	*Stock No.*	*Price*
18 in.	24 in.	9001	$60.00

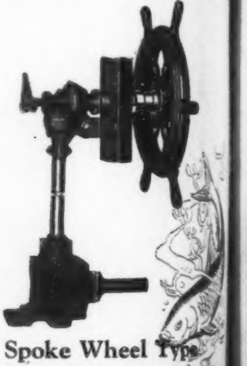


Heavy Cruiser Type

Chromium Plated Bronze

Equipped with Husted Safety Whe
All exposed bronze parts, including di
controls and horn button, chromi
plated. Suitable for cruisers up to 60 fe
This gear furnished with Model B qua
rant section included.

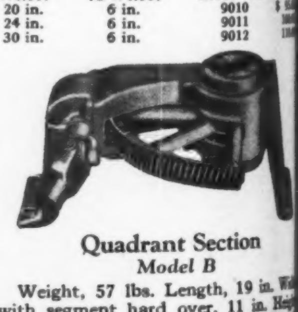
Diam. Wheel	*Height Deck to Wheel*	*Stock No.*	*Pri*
18 in.	36 in.	9015	[illegible]



Spoke Wheel Type

Suitable for cruisers up to 60 feet. Fi
with Fancy Mahogany Spoke Stee
wheel with controls and horn button.

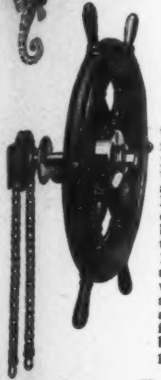
Diam. Wheel	*Distance Bulkhead to Wheel*	*Stock No.*	*Pri*
20 in.	6 in.	9010	[illegible]
24 in.	6 in.	9011	[illegible]
30 in.	6 in.	9012	[illegible]



Quadrant Section

Model B

Weight, 57 lbs. Length, 19 in. Wi
with segment hard over, 11 in. Hei
9 in. Can be bored for rudder stock,
in. to 2½ in. Furnished with models 19
1911, 1912 and 1915.



Cruiser Type Chain Steerer

The most desirable type of steering gear for power cruisers and yachts; and adds materially to the appearance of your boat. Heavy roller link brass chain operating over bronze gear; all mounted on 1⅛ bronze shaft, 10 inches long. These steerers are furnished with fancy mahogany spoke steering wheels, all natural finished, and fitted with two-part bronze hubs, highly polished.

Stock No.	*Diam. of Wheel*	*No. of Spokes*	*Weight*	*Price*
1330	20 in.	6	18 lbs.	$50.00
1331	24 in.	6	19 lbs.	55.00
1332	30 in.	6	22 lbs.	75.00
1333	36 in.	8	28 lbs.	90.00

Wheels with two white holly ribbons inlaid on forward side, $6.00 additional

Fancy Wood Steering Wheels

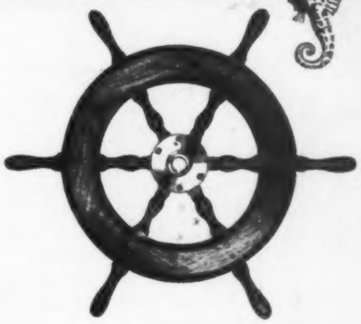
Furnished natural wood finish unvarnished.

Our wheels are made of selected genuine mahogany, fastened throughout with brass screws capped with plugs, and fitted with two part polished bronze hubs, which allows taking up play in spokes caused by shrinkage.

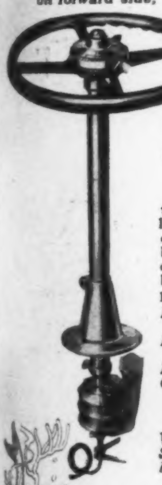
(Diameter is measured from tip to tip of spokes.)

Diameter of Wheel	*No. of Spokes*	*Bored for Shaft*	*Size Keyway*	*Stock No.*	*Price*
20 in.	6	1⅛ in.	¼ in.	1306	$30.00
24 in.	6	1⅛ in.	¼ in.	1307	35.00
30 in.	6	1⅛ in.	¼ in.	1309	45.00
36 in.	8	1¼ in.	5/16 in.	1310	60.00
42 in.	8	1¼ in.	5/16 in.	1311	70.00
48 in.	8	1¼ in.	5/16 in.	1312	90.00

Wheels with two white holly ribbons inlaid on forward side, $6.00 additional.



KAINER Drum Type Steerers

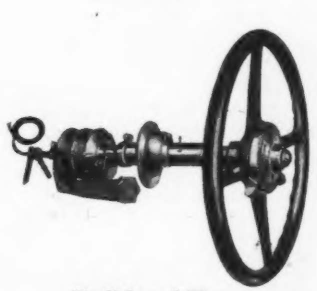


Vertical Type

Chromium Plated Bronze

Equipped with Husted Safety Wheel and latest design metal controls. All exposed bronze parts including dial, controls and horn button are Chromium plated.

Diam. Wheel..... 18 in.
Diam. Column... 1 11/16 in.
Diam. Drum. 3½ in.
Column Length Deck to Wheel.....36 in.
Weight......24 lbs.
Stock No..... 1317
Price........ $45.00



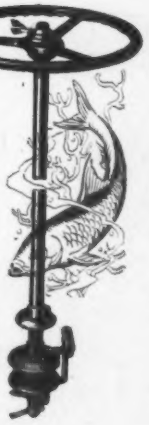
Bulkhead Type

Chromium Plated Bronze

Fitted with Husted Safety Wheel and Metal Controls. All exposed bronze parts, including dial, controls and horn button are chromium plated.

Diam. Wheel	*Diam. Column*	*Length Column Bulkhead to Wheel*	*Weight*
18 in.	1 11/16 in.	6 in.	19 lbs.

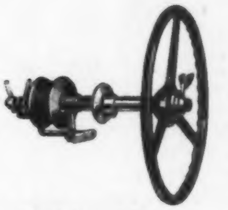
Stock No.	*Price*
1316	$40.00



Vertical Type

Fitted with Husted Safety Wheel, latest design metal controls and hard rubber horn button.

Diam. Wheel.....16¾ in.
Diam. Column... 1¼ in.
Diam. Drum..... 4 in.
Length Column Deck to Wheel..36 in.
Weight...........14 lbs.
Stock No......... 1505
Price............. $25.00

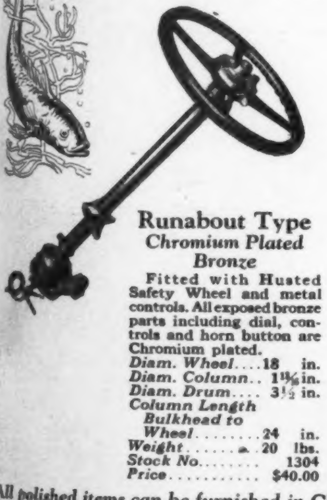


Bulkhead Type

Fitted with Husted Safety Wheel, latest design metal controls and hard rubber horn button.

Diam. Wheel	*Diam. Column*	*Diam. Drum*	*Length Column Bulkhead to Wheel*
16¾ in.	1¼ in.	4 in.	6 in.

Weight	*Stock Number*	*Price*
11 lbs.	1504	$22.00

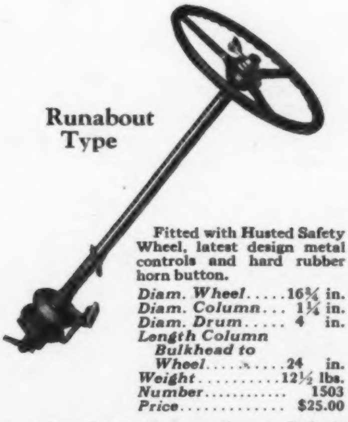


Runabout Type

Chromium Plated Bronze

Fitted with Husted Safety Wheel and metal controls. All exposed bronze parts including dial, controls and horn button are Chromium plated.

Diam. Wheel....18 in.
Diam. Column.. 1 11/16 in.
Diam. Drum.... 3½ in.
Column Length Bulkhead to Wheel........24 in.
Weight.......20 lbs.
Stock No........ 1304
Price............ $40.00



Runabout Type

Fitted with Husted Safety Wheel, latest design metal controls and hard rubber horn button.

Diam. Wheel.....16¾ in.
Diam. Column... 1¼ in.
Diam. Drum..... 4 in.
Length Column Bulkhead to Wheel..........24 in.
Weight...........12½ lbs.
Number............ 1503
Price............. $25.00

45 foot Huckins Fairform Flyer, Kainer Equipped

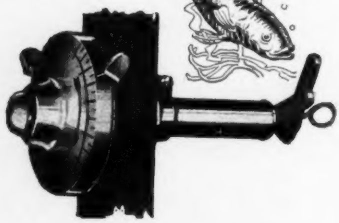
All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

Column Spark and Throttle Control

Cruiser Type

All bronze; machined throughout. Bracket, control arms and deck flange adjustable. Calibrated dial, spark and throttle handles, and signal button, polished bronze. Standard height column, 48 in., furnished unless otherwise specified. Additional charge for extra length.

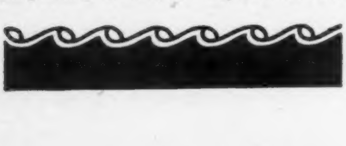
Column Diam.	*Weight*	*Stock No.*	*Price*
1¼ in.	11 lbs.	1701	$18.00



Bulkhead Spark and Throttle Control

All bronze heavily constructed, machined throughout and highly finished. Control handles and quadrant are same type as those on column control. Can be installed in either a vertical or horizontal position. Control arms adjustable to any angle perpendicular to tube. Tube which extends through bulkhead is 3 in. in depth from base of flange. Longer tube furnished at small additional charge.

Column Diam.	*Weight*	*Stock No.*	*Price*
1¼ in.	5 lbs.	1702	$14.00



Baby Gar Forty, Black Beauty Speed Boat, Kainer Equipped

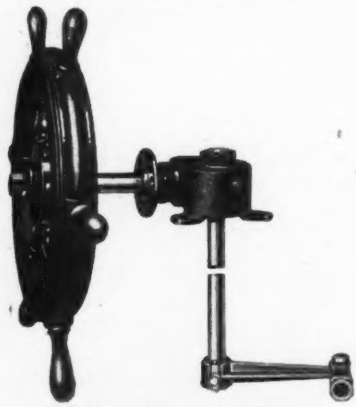
Marine Type Drag Link Steerer

Chromium Plated Bronze

Made entirely of bronze. Genuine Husted hard rubber wheel and spider on one piece steel core. All exposed parts, including bronze controls, dial and horn button, chromium plated. This steerer will retain its beautiful appearance under the hardest usage.

Gear furnished complete with adjustable base and bulkhead plate, also tiller arm and fittings for rudder. Only additional material necessary is pipe used to couple steerer arm to rudder arm. Gear housing fitted with alemite fitting.

Diam. Wheel	*Diam. Column*	*Bulkhead to Wheel*	*Weight*	*Stock No.*	*Price*
18 in.	1$\frac{11}{16}$ in.	24 in.	27½ lbs.	1905	$55.00



Cruiser Bulkhead Type

Worm Drag Link Steerer

A heavily constructed worm driven steering device fitted with drag link arm and tiller arm. Fitted with fancy mahogany spoke steering wheel, natural finish, fitted with two-part bronze hub, highly polished. Smooth acting and particularly suitable for cruisers.

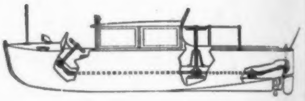
Made entirely of bronze.

Diam. Wheel	*No. Spokes*	*Weight*	*Stock No.*	*Price*
20 in.	6	19 lbs.	1334	$65.00
24 in.	6	20 lbs.	1335	70.00
30 in.	6	21 lbs.	1336	80.00
36 in.	8	29 lbs.	1337	90.00

Spark, Throttle and Clutch Levers

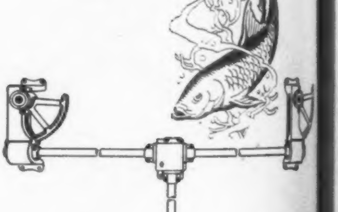
A combination that will save valuable deck space. Gives centralized control of engine. Bracket adjustable. Clutch lever hinged and fitted with wing screw so lever can be made stationary in horizontal position. Made entirely of bronze and brass. Machined and highly finished throughout. Standard height from deck to top of controls, 42 inches. Additional charge for longer lengths.

Column Diam.	*Weight*	*Stock No.*	*Price*
1⅝ in.	31 lbs.	1720	$65.00



Dual Control Installation

Our ropeless steering gears are ideally adaptable for dual control installation, operating from either the forward cockpit or from bridge on express cruisers or commuters, as illustrated above. Both steering control units are coupled to and work through the **ERICO-KAINER** gear box, making the most efficient and satisfactory dual installation obtainable.

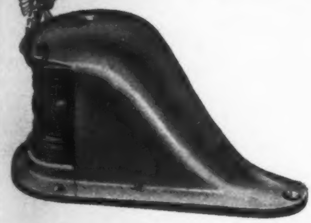


Twin Rudder Control

For twin rudder installation used in connection with steering gears. 9001, 9005, 9009, 9010, 9011, 9012 and 9015. Two Model "A" housing Quadrant Sections No. 9040 used as illustrated above at an additional cost of $50.00.

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

ERICO KAINER

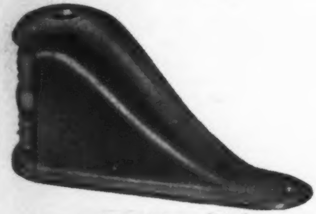


Streamline Combination Light
Class One
Polished Brass or Nickel Silver

Fitted with double contact base socket, bulb and regulation size Fresnal lenses.

Base Dimensions	Height Over All	Weight	Stock No.
6⅛x10⅝ in.	4¼ in.	5¼ lbs.	4408

Nickel Silver	Brass
$14.20	$13.00

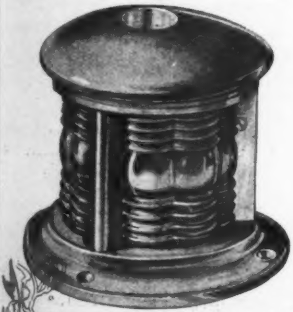


Streamline Bow Light
Class Two and Three
Polished Brass or Nickel Silver

Fitted with double contact base socket, bulb and regulation size Fresnal lens.

Class	Base Dimensions	Height	Weight
2	12 x5¼ in.	5 in.	6 lbs.
3	14½x6 in.	6 in.	7½ lbs.

Stock No.	Nickel Silver	Brass
4410	$17.60	$16.00
4411	24.20	22.00



Combination Electric Post Light
Class One
Polished Brass or Nickel Silver

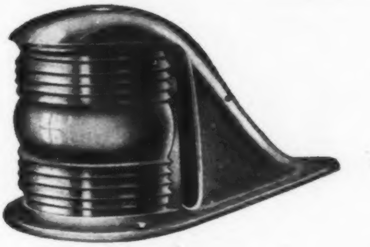
This post light can be used in place of the r[illegible] lights on Class One boats under 26 [illegible], also serves as a mooring bitt and flagpole socket.

[illegible] finished in bronze, aluminum or nickel silver. Fitted with double contact base socket, bulb and regulation size Fresnal lenses.

[illegible] type retainer prevents rattling of lenses.

	Height	Base Diam.	Weight
Bronze	5¼ in.	6⅜ in.	5½ lbs.
Aluminum	5¼ in.	6⅜ in.	2½ lbs.
Nickel Silver	5¼ in.	6⅜ in.	5½ lbs.

Stock No.	Price*
4406	$12.00
4407	12.00
4426	13.20

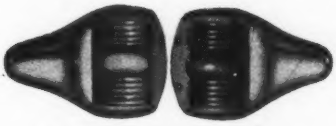


Streamline Bow Light with Ventilators
Class Two
Polished Brass or Nickel Silver

Fitted with double contact base socket, bulb and regulation size Fresnal lens.

Length	Height	Weight	Stock No.
12 in.	5 in.	6½ lbs.	4412

Nickel Silver	Brass
$17.60	$16.00

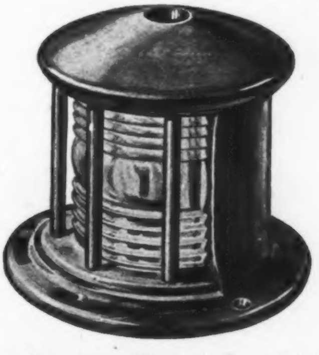


Streamline Side Lights
Polished Brass or Nickel Silver

Fitted with double contact base socket, bulb and regulation size Fresnal lenses.

Class	Height	Length	Projection
1	4 in.	5½ in.	2½ in.
2	5¼ in.	7½ in.	3 in.
3	6 in.	8½ in.	3¼ in.

Weight per Pair	Stock No.	Nickel Silver	Brass
3 lbs.	4414	$ 8.80	$ 8.00
5 lbs.	4415	12.10	11.00
6 lbs.	4416	22.00	20.00



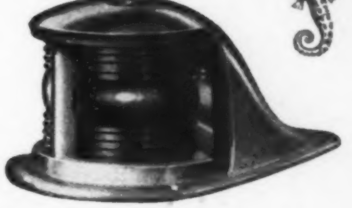
Combination Electric Post Light
Class Two
Polished Brass or Nickel Silver

This electric post light can be used in place of the regular bow light on Class 2 boats, and serves as a riding bitt or snubbing post as well.

A highly polished heavy casting, fitted with double contact base socket, bulb and regulation size Fresnal lens. A new type retainer prevents rattling of lens.

Socket in center of top for flagpole

Height	Base Diam.	Weight	Stock No.	Nickel Silver	Brass
6½ in.	7 in.	8½ lbs.	4404	$13.75	$12.50



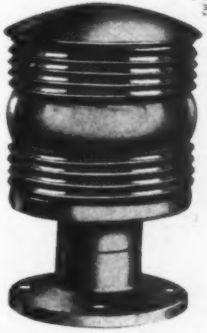
Streamline Combination Light with Ventilators
Class One

Polished Brass or Nickel Silver

Fitted with double contact base socket, bulb and regulation size Fresnal lenses.

Length	Height	Weight	Stock No.
10¾ in.	4¼ in.	6 lbs.	[illegible]

Nickel Silver	Brass
$15.40	$14[illegible]



Electric Stern Light
Polished Brass or Nickel Silver

A sturdy fitting which adds a touch of class.

Any height can be secured by substituting required length of 1 in. I. P. S. brass tube (standard threaded) for the brass nipple joining the two parts of pedestal in stock article.

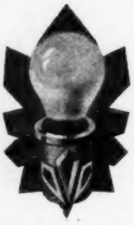
Base diameter, 4⅛ inches. Fresnal lens 3½ inches diameter by 3 inches high in clear. Fitted with double contact base socket, and bulb Weight, 11 lbs.

Stock No.	Nickel Silver	Brass
4405	$9.00	$8.00

26-foot Hacker Runabout, Kainer Equipped

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

KAINER & COMPANY
CHICAGO



Single Light Bracket

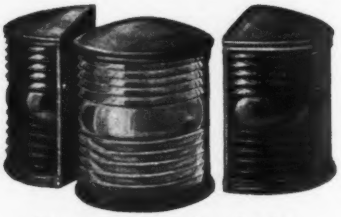
Polished Brass or Nickel Silver

This bracket with ornamented wall plate of modern design makes an attractive addition to any modern cabin interior.

Base 3¾x6½ in.
Projection less lamp 2¾ in.
Weight 1¼ lb.

Stock No. 3040 Brass without switch......$2.75
Stock No. 3041 Brass with switch.......... 3.00
Stock No. 3042 Nickel silver without switch. 3.00
Stock No. 3043 Nickel silver with switch... 3.25

Prices do not include lamps.



Electric Running Lights

Polished Brass or Nickel Silver

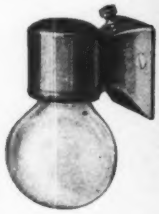
The frame of each of these lights is a single casting, with reinforcing post on each side of bow light and on outer edge of side lights. The Fresnal lens, regulation size, is firmly held by a new type retainer. Fitted with double contact bayonet base socket and bulb.

The side lights are made in three sizes, for boats of Class 1, 2 and 3.

The bow light is made in two sizes, for boats of Class 2 and 3.

Class	*Height*	*Weight*	*Set*
1	4¼ in.	3 lbs.	Pair Side Lights
2	5½ in.	8 lbs.	Three
3	6½ in.	11 lbs.	Three

Stock No.	*Nickel Silver*	*Brass*
4401	$ 8.80	$ 8.00
4402	16.50	15.00
4403	22.00	20.00



Single Light Bracket

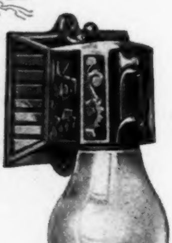
Polished Brass or Nickel Silver

A compact fixture with medium base socket.

Base 2x2 in.
Projection less lamp 2¾ in.
Drop over all less lamp 2⅝ in.
Weight ⅞ lb.

Stock No. 3020 Brass without switch......
Stock No. 3021 Brass with switch..........
Stock No. 3022 Nickel silver without switch.
Stock No. 3023 Nickel silver with switch....

Prices do not include lamps.



Single Light Bracket

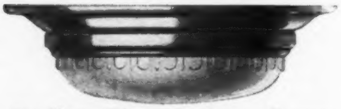
Polished Brass or Nickel Silver

A sturdy, compact bracket of attractive design.

Base 2½x2½ in.
Projection less lamp 2½ in.
Weight 1 lb.

Stock No. 3050 Brass without switch......$2.50
Stock No. 3051 Brass with switch.......... 2.75
Stock No. 3052 Nickel silver without switch. 2.75
Stock No. 3053 Nickel silver with switch... 3.00

Prices do not include lamps.

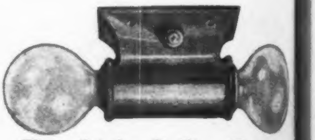


Shallow Electric Dome Lamp

Highly finished cast brass, hingeless, with silver-plated reflector and ornamental frosted globe. Double contact sockets.

Diameter Over All	*Depth Over All*	*Without Switch Stock No.*	*Price*
5½ in.	1⅞ in.	3010	$5.00
8 in.	2½ in.	3014	8.50

With Switch Stock No.	*Price*
3012	$6.00
3016	9.50



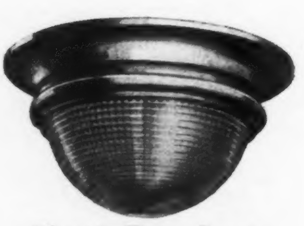
Two Light Ceiling Fixture

Polished Brass

Designed for use between roof car and wherever headroom is limited. Al makes an excellent wall fixture. Medi screw base sockets.

Base 2 in. x 3½ in.
Projection, less lamps, 2⅝ in.
Weight, 1 lb.
Stock No. 3030—Without Switch. Price
Stock No. 3031—With Switch. Price

Prices do not include lam



Electric Dome Lamp

Highly finished cast brass, hingeless, with silver-plated reflector and holophane shade.

5 in. fitted with double contact bayonet base socket. Weight 1½ lbs.

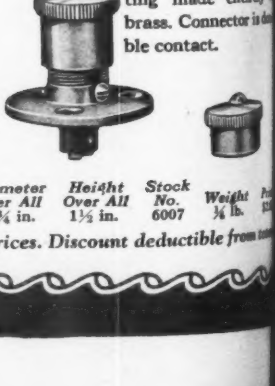
8 in. fitted with medium screw base socket. Weight 2¾ lbs.

Diameter Over All	*Depth Over All*	*Without Switch Stock No.*	*Price*
5 in.	3 in.	3003	$ 6.00
8 in.	4¼ in.	3004	10.00

With Switch Stock No.	*Price*
3007	$ 7.00
3008	12.00

28-foot Richardson Cruisabout
Kainer Equipped

Watertight Deck Connectio

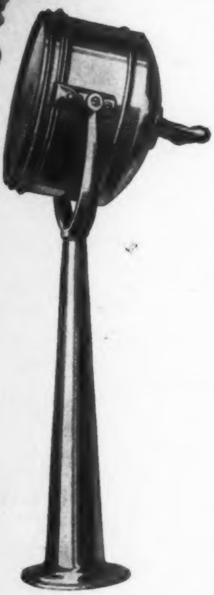


A small compact ting made entirely brass. Connector is ble contact.

Diameter Over All	*Height Over All*	*Stock No.*	*Weight*
1¾ in.	1½ in.	6007	⅜ lb.

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from

ERICO KAINER

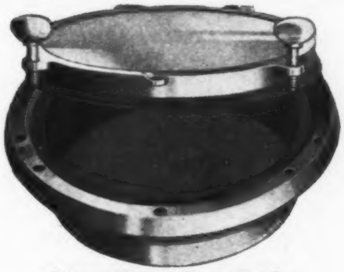


Deck Control Searchlight

Polished Brass

Diameter Barrel	*Height from Deck*	*Stock No.*	*Weight*	*Price*
8¾ in.	27 in.	804	12 lbs.	$50.00

Erico-Kainer searchlights are made entirely of brass, Bausch and Lomb reflectors; adjustable for wide or narrow beam; substantial, durable construction; powerful, brilliant beam light.



New Type Port Light

(Patent applied for)

Cast Brass or Nickel Silver

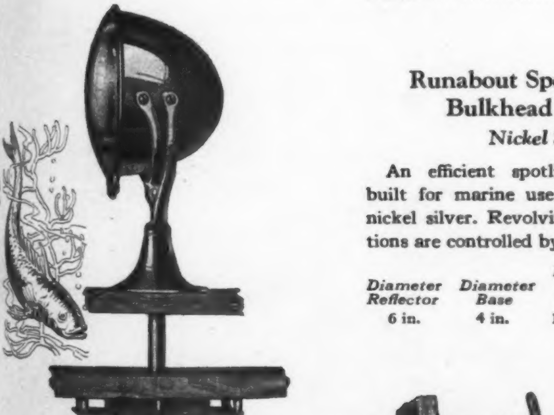
A most important advance in marine equipment design. New type construction embodies many new and exclusive features.

Interchangeable round rubber gasket which seals on taper seat, assuring absolutely watertight door when closed. Adjustable hinges, full size glass, small over all diameter, replaceable screen and perfect finish throughout. The 5 in. size made with one clamp; larger sizes have two clamps. Price includes finishing rings.

		Prices		
		Length of Sleeve 3 in. or less		
Diameter Opening	*Diameter Overall*	*Plain Brass*	*Polished Brass*	*Nickel Silver*
5 in.	8 in.	$ 8.00	$ 9.50	$10.50
7 in.	9¾ in.	10.00	11.70	13.00
9 in.	12 in.	13.50	17.00	19.00
11 in.	14 in.	20.00	24.00	27.00
		Length of Sleeve, 3 in. to 6 in.		
5 in.	8 in.	$10.00	$12.00	$13.50
7 in.	9¾ in.	12.00	14.50	16.00
9 in.	12 in.	15.00	20.00	22.00
11 in.	14 in.	23.00	29.00	31.00

If screens are required add to above prices as follows:

5 inches	$0.70
7 inches	0.85
9 inches	1.00

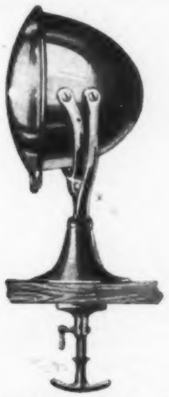


Runabout Spotlight with Bulkhead Control

Nickel Silver

An efficient spotlight designed and built for marine use. Made entirely of nickel silver. Revolving and vertical actions are controlled by the same lever.

Diameter Reflector	*Diameter Base*	*Height from Deck*	*Stock No.*	*Price*
6 in.	4 in.	10¾ in.	917	$45.00

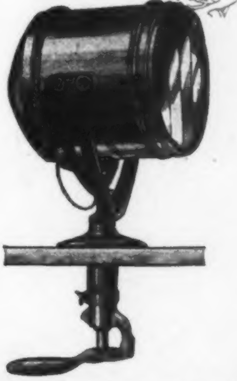


Cabin Control Spotlight

Nickel Silver

An efficient and attractive small searchlight for sedans and small cruisers; made entirely of nickel silver.

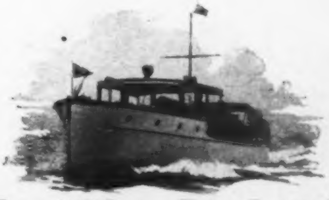
Diameter Reflector	*Weight*	*Height from Deck*	*Stock No.*	*Diam. Base*	*Price*
6 in.	7½ lbs.	10¾ in.	91[illegible]	[illegible]	[illegible]0.00



Erico-Kainer Cabin Control Searchlight

Polished Brass

Diameter Barrel	*Height from Deck*	*Stock No.*	*Weight*	*Price*
8¾ in.	13 in.	800	14 lbs.	$60.00



Dawn "45" Cruiser, Kainer Equipped

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

KAINER & COMPANY
CHICAGO

Bow Flag Staff

Mahogany

Bow flag staff, genuine mahogany well made and nicely finished in spar varnish.

Length Over All	*Diam. Base*	*Weight*	*Stock No.*	*Price*
26 in.	1¾ in.	½ lb.	6005	$2.00

Upright Bow Flag Staff Socket

Polished Brass

Diameter of Base	*Diameter of Hole*	*Stock No.*	*Price*
2[illegible] in.	1¼ in.	6026	$1.50

Yacht Bell

Highly polished, cast bell metal with detachable bracket.

Diameter	*Projection Over All*	*Weight*	*Stock No.*	*Price*
8 in.	8¾ in.	8¾ lbs.	515	$11.00

34 foot Liggett Cruiser, Kainer Equipped

Combination Flag Staff and Electric Stern Light

Mahogany

Combination aft flag staff and electric stern light, genuine mahogany, with brass ferrule.

Fitted with polished bronze electric fixture and fluted globe, wired complete with electric connector. All wires concealed.

Length Over All	*Diam. Base*	*Weight*	*Stock No.*	*Price*
45 in.	1¼ in.	1¾ lbs.	6004	$7.00
36 in.	1¼ in.	1½ lbs.	6009	7.00

Stern Flag Staff Socket

Polished Brass

For use with combination aft flag staff and electric stern light. Open base for stern light wires, and fitted with knurled head set screw to hold flag staff in place and keep electric connector on deck when flag staff is removed. For 1¼ in. flag staff.

Length	*Width*	*Weight*	*Stock No.*	*Price*
3¾ in.	4 in.	1 lb.	6003	$2.00

Stern Light and Flagpole Top

Cast Brass Polished

Diam. Globe	*Diam. Base*	*Weight*	*Stock No.*	*Pri*
3 in.	1½ in.	1 lb.	6019	$1.[illegible]

Bronze Yacht Cannon

A very handsome and practical saluting gun made entirely of bronze, highly polished and machined. Breech loading. Bored for 10 gauge blank shells only.

Length of Barrel	*Height Over All*	*Diam. of Base*	*Weight*	*Stock No.*	*Pri*
18 in.	16 in.	8 in.	30 lbs.	6002	$10[illegible]

Mazda Electric Bulbs

For Marine Use

Double Contact Bayonet Base

(Used in Our Running Lights and Dome Lamp and Stern Lights)

Volts	*Watts*	*Bulb*	*Glass*	*Stock No.*
6	4	G 8	Clear	201
12	4	G 8	Clear	202
24	4	G 8	Clear	203
32	8	G 10	Clear	204
110	15	G 16½	Clear	205

Medium Screw Base

(Used in Our Bracket Lamp)

Volts	*Watts*	*Bulb*	*Glass*	*Stock No.*
6	15	A 17	Frosted	206
12	15	A 17	Frosted	207
24	21	A 17	Frosted	208
32	15	A 17	Frosted	209
110	25	A 19	Frosted	210

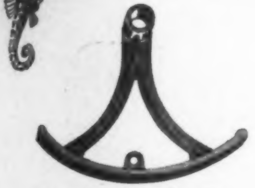
Double Contact Bayonet Base

(Used in Our Spotlights and Searchlights)

Volts	*C.P.*	*Bulb*	*Glass*	*Stock No.*
6	32	S 11	Clear	217
12	32	S 11	Clear	218
32	32	S 11	Clear	219

The above prices on Mazda Bulbs are Net and not subject to discount

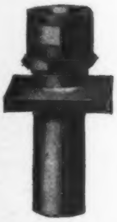
All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.



Tiller Quadrant

Brass

Radius	Size Hole	Stock No.	Weight	Price
8 in.	1⅛ in.	407	3 lbs.	$4.00

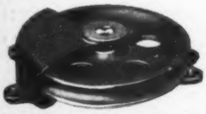


Rudder Stuffing Box and Bearing

Brass

A rigid, substantial bearing and stuffing box which makes a very simple and inexpensive installation.

Size Shaft	Dimensions Plate	Weight	Stock No.	Price
1⅛ in.	3½x3¾ in.	4⅛ lbs.	8001	$8.00
1¼ in.	3½x3¾ in.	4 lbs.	8002	8.00
1⅜ in.	3½x3¾ in.	6¼ lbs.	8003	9.00
1½ in.	3½x3¾ in.	6 lbs.	8004	9.00

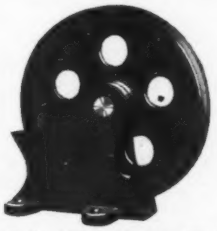


Flat Wire-Rope Pulley or Quarter Block

Plain Brass

Meets the demand for a stronger, better designed pulley of this type. Very substantial construction.

Diam. of Sheave	For Diam. of Cable	Dimensions Over All	Stock No.	Price
6 in.	[illegible] in.	8½x7½ in.	1423	$7.00
8 in.	[illegible] in.	10½x8 in.	1424	9.00

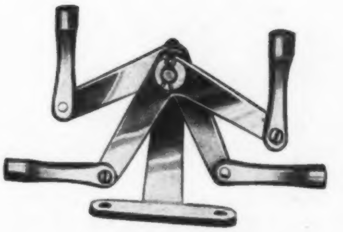


Upright Wire-Rope Pulley or Quarter Block

Plain Brass

Meets the demand for a stronger, better designed pulley of this type. Very substantially made.

Diam. of Sheave	For Diam. of Cable	Dimension Base	Height	Stock No.	Price
6 in.	⅜ in.	6½x3½ in.	7½ in.	1421	$7.00
8 in.	½ in.	5 x4 in.	9 in.	1422	9.00



Control Crank

Brass

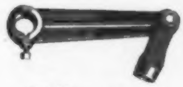
Upright Bracket Control Crank

Style	Stock No.	Price
With double crank	1206	$1.75
With single crank	1207	1.10

Side Bracket Control Crank

Style	Stock No.	Price
With double crank	1208	$1.75
With single crank	1209	1.10

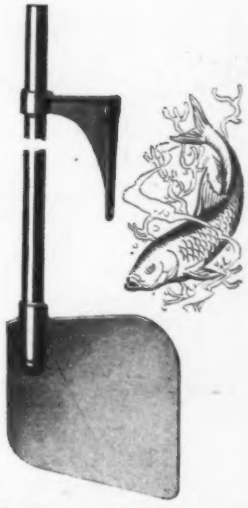
Extra Control Rod Sockets, tapped for ¼ in rod, $0.25.



Tiller Arm

Brass

Tapped for	Length Between Centers	Size Hole	Weight	Stock No.	Price
½ in. Pipe	7¼ in.	1⅛ in.	3 lbs.	405	$5.00



Rudder and Brace

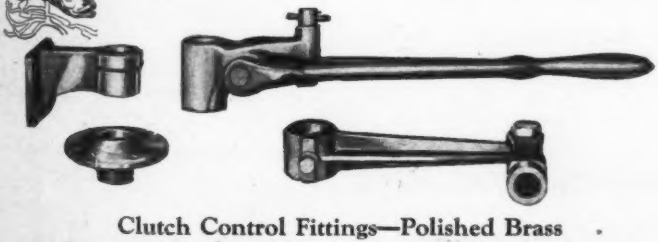
Brass

Rudder Only

Size Blade	Length Shaft	Diam. Shaft	Weight	Stock No.	Price
9 in. x 9 in.	15 in.	1⅛ in.	10½ lbs.	410	$14.00

Brace Only

Distance Center of Shaft to Transom	Weight	Stock No.	Price
4 in.	1½ lbs.	411	$2.75



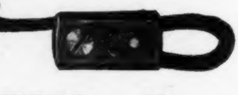
Clutch Control Fittings—Polished Brass

Set consists of handle, bulkhead bracket, flange and lower lever.

Length Handle	Weight Per Set	Stock No.	Price Per Set
14 in.	15 lbs.	1704	$24.00

Matthews Speed Cruiser,
Kainer Equipped

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.



Tiller Rope Clamp

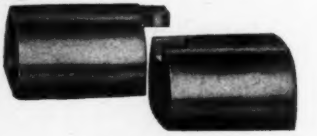
Plain Brass

Rope Diameter	Length	Width	Stock No.	Price
⅛ in.	1³⁄₁₆ in.	¹¹⁄₁₆ in.	6061	$0.40
³⁄₁₆ in.	1⅝ in.	⅞ in.	6062	.45
¼ in.	1¹³⁄₁₆ in.	1 in.	6063	.50
⁵⁄₁₆ in.	2¹⁄₁₆ in.	1⅛ in.	6064	.60
⅜ in.	2¼ in.	1¼ in.	6065	.75

Rail Hinge

Polished Brass

Dimensions Rail	Length Over All	Weight	Stock No.	Price Per Set
1¼x2½ in.	5 in.	3 lbs.	8070	$4.00
1⅜x3 in.	3⅝ in.	2¾ lbs.	8071	4.00



Rail Lock

Polished Brass

Dimensions Rail	Length Over All	Weight Per Set	Stock No.	Price Per Set
1½x2½ in.	5 in.	3 lbs.	8075	$4.00
1⅜x3 in.	3⅝ in.	2¾ lbs.	8076	4.00

Skylight Hinge

Polished Brass

Makes possible a watertight skylight when used with our special trough and hook brass. Substantial and smooth working. Hinges installed inside. Cut shows half pair.

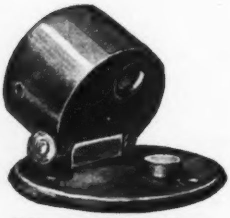
Weight Per Pair	Width Flange	Stock No.	Price Per Pair
5 lbs.	5 in.	9070	$8.00

18-foot Dart Runabout,
Kainer Equipped

Mast Hinge

Polished cast bronze designed to hinge mast at canopy or deck house roof, or at any other point. The horizontal arms are 8 in. long, which allows for spar from 3 in. to 6 in. diameter; also for fastening to cabin roof. Horizontal arms can be cut off to conform to diameter of spar if projection is not required.

Height Over All	Width	Weight	Stock No.	Price
16 in.	2⅝ in.	7 lbs.	6010	$12.00

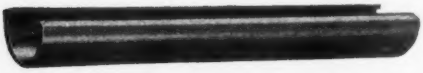


Hinged Mast Step

Polished Brass

Permits mast to be lowered parallel to deck. Illustration shows step partially turned down.

Mast Step Diameter	Base Flange Diameter	Weight	Stock No.	Price
3½ in.	5 in.	4¼ lbs.	501	$ 6.00
5½ in.	8 in.	13 lbs.	503	14.00

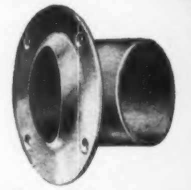


Skylight Brass Trough

Diameter	Thickness	Stock No.	Price Per Foot
3 in.	18 ga.	9071	$1.50

Skylight Hook Brass

Width	Thickness	Stock No.	Price Per Foot
1 in.	18 ga.	9072	$0.30

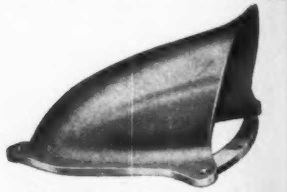


Engine Compartment Outlet Ventilator

For use on runabouts where ventilation outlets through the hull are desired, instead of on deck or hatch covers.

Made of cast brass or nickel silver, with exposed surface highly polished. Interior finished in red enamel.

Diam. of Flange	Diam. Opening	Weight	Stock No.	Nickel Silver	Brass
4 in.	2⅛ in.	18 oz.	6050	$2.00	$1.75



Clam-Shell Ventilator

Polished Brass or Nickel Silver

Used on speed boats in place of cowl ventilator; also as exhausting ventilator by reversing.

Width of Opening	Extreme Height	Dimensions of Base	Weight	Stock No.	Nickel Silver	Brass
3½ in.	2⅞ in.	4¾x6¼ in.	1¾ lbs.	1608	$3.00	$2.60
4½ in.	3¾ in.	6¼x7½ in.	2¾ lbs.	1609	4.00	4.00
6 in.	4¾ in.	7½x9½ in.	3½ lbs.	1610	5.50	5.00

Cast Aluminum, Brass or Nickel Silver Cowl Ventilator

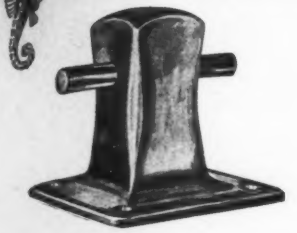
Oval Mouth

All Polished

Prices include key for deckplate.

Diam. at Deck Plate	Dimensions of Mouth	Height Over All	Stock No.	Nickel Silver	Aluminum	Brass
3in.	6¾x4¾ in.	9 in.	1601	$14.00	$11.00	$12.00
4in.	7¼x5½ in.	10½ in.	1602	17.00	14.00	15.00
5in.	9 x6¾ in.	12 in.	1603	22.00	18.00	20.00

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

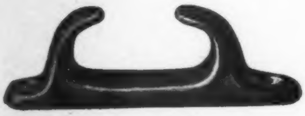


Mooring Bitt

Polished Brass or Nickel Silver

This highly polished cast fitting, in addition to its usefulness will add much to the appearance of any boat.

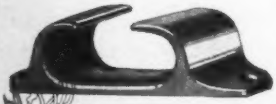
Dimensions of Base	Extreme Height	Weight	Stock No.	Nickel Silver	Brass
4¼x4¼ in.	3½ in.	2½ lbs.	1908	$ 3.85	$ 3.50
6 x6 in.	5 in.	7 lbs.	1909	8.50	7.70
7 x7 in.	6½ in.	8½ lbs.	1910	12.10	11.00
9 x9 in.	8½ in.	17½ lbs.	1911	17.60	16.00



Stern Chocks

Polished Brass

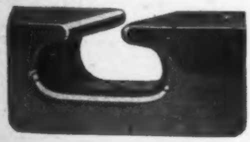
Length Over All	Opening for Rope	Stock No.	Price Each
4 in.	11/16 in.	6090	$0.70
5 in.	13/16 in.	6092	1.10
6 in.	1¼ in.	6094	1.40
7 in.	1¼ in.	6096	2.00
8½ in.	1⅜ in.	6098	2.50



Skene Bow Chocks

Polished Brass or Nickel Silver

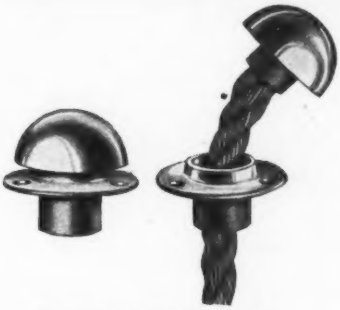
Lgth.	Wdth.	Rope Size	Stock No.	Wt.	Prices Brass	Prices Nickel Silver
3 in.	[illegible]	[illegible] in.	6071	9 oz.	$1.20	$1.30
4 in.	[illegible]	¾ in.	6073	15 oz.	1.40	1.50
5¼ in.	[illegible] in.	[illegible] in.	6075	23 oz.	2.00	2.15
6½ in.	[illegible] in.	1[illegible] in.	6077	32 oz.	2.50	2.70



Skene Bulwark Chock

Polished Brass or Nickel Silver

Rope Size	Rail Size	Stock No.	Weight	Prices Brass	Prices Nickel Silver
⅞ in.	31/32 in.	1950	1½ lbs.	$2.50	$2.70
1 in.	1 7/32 in.	1951	2½ lbs.	3.75	3.95
1¼ in.	1 15/32 in.	1952	3½ lbs.	6.00	6.25
1½ in.	1 31/32 in.	1953	4½ lbs.	8.00	8.30

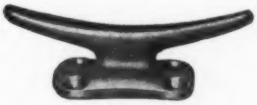


Rope End and Deck Pipe

Polished Brass or Nickel Silver

A handy fitting where deck lines are carried below deck. The lower end of rope being fastened to the stem and the other end in the brass cap as illustrated. Suitable for runabouts.

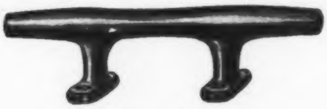
Flange	Height Above Deck	Weight	Stock No.	Nickel Silver	Brass
2½ in.	1½ in.	¾ lb.	1980	$2.50	$2.25



Fender Cleat

Polished Brass

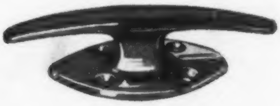
Length Over All	Dimensions Base	Weight	Stock No.	Price
2¾ in.	1x1½ in.	¼ lb.	1920	$0.60



Hollow Cleats

Polished Brass or Nickel Silver

Length Over All	Stock No.	Nickel Silver	Brass
4½ in.	2930	$1 80	$1.55
5½ in.	2932	2.00	1.80
6½ in.	2934	2.50	2.25
8 in.	2936	3.25	2.80
9½ in.	2938	5.00	4.60

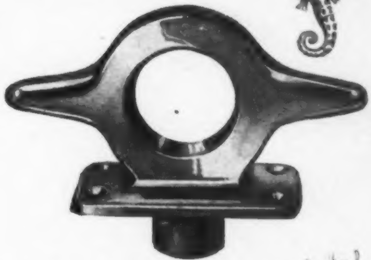


Stream Line Cleats

Polished Brass or Nickel Silver

The streamline design of this cleat brings it close to the deck.

Size	Weight	Stock No.	Prices Brass	Prices Nickel Silver
2½ in.	3 oz.	1925	$0.60	$0.65
4 in.	7 oz.	1926	1.30	1.40
6 in.	12 oz.	1927	1.60	1.75
8 in.	22 oz.	1928	2.50	2.70

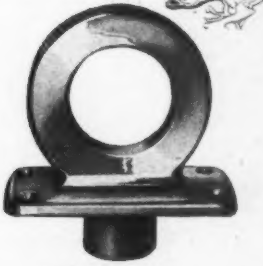


Combination Lifting Ring and Cleat

Polished Brass

Boss which goes through deck is tapped 1 in. standard thread.

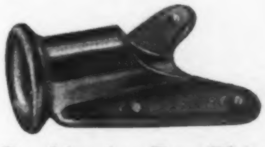
Length Over All	Dimensions Base	Stock No.	Price
7 in.	2x4 in.	90[illegible]1	[illegible].50



Lifting Ring

Polished Brass

Length Base	Width Base	Stock No.	Price
4 in.	2 in.	9080	$4.00



Combination Bow Plate

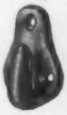
Polished Brass or Nickel Silver

This fitting serves as a finishing plate and bow chock on small runabouts. For rope up to 1 in. diameter.

Length	Width	Weight	Stock No.	Nickel Silver	Brass
4¼ in.	5 in.	1¼ lbs.	1915	$4.00	$3.50

Fender Hook

Polished Brass or Nickel Silver



A neat fitting for attaching fenders.

Size Base	Weight	Stock No.	Nickel Silver	Brass
2x1⅜ in.	2½ oz.	1914	$0.50	$0.40

Sea Lyon "60," 36 foot runabout, Kainer Equipped

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

Through Hull Connection

Plain Brass

A very convenient fitting for boat plumbing fixtures.

Stock No.	*Size Pipe*	*Price*
6011	½ in.	$0.70
6012	¾ in.	.85
6013	1 in.	1.20
6014	1¼ in.	1.70
6015	1½ in.	2.55
6016	2 in.	3.20
6017	2½ in.	5.65
6018	3 in.	6.60

Standard Lead Pipe Fittings

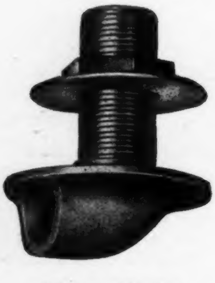
Can be used with through hull connections, intake strainers and water outlets.

Straight Connection

Size	*Stock No.*	*Weight*	*Price*
¾ in.	6030	6 oz.	$0.60
1 in.	6031	7 oz.	.70
1¼ in.	6032	10 oz.	.80
1½ in.	6033	16 oz.	1.10

Elbow Connection

Size	*Stock No.*	*Weight*	*Price*
¾ in.	6035	7 oz.	$0.65
1 in.	6036	8 oz.	.75
1¼ in.	6037	13 oz.	.85
1½ in.	6038	17 oz.	1.15



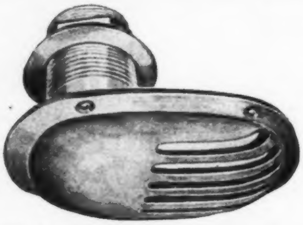
Water Outlet

Polished Brass

This fixture can be used with standard lead pipe connections.

Size Pipe	*Diameter Flange*	*Weight*	*Stock No.*	*Price*
¾ in.	2¾ in.	1 lb.	6051	$2.00
1 in.	3 in.	1½ lbs.	6052	2.75

Robinson Sea Gull, Kainer Equipped



High Speed Intake Strainer

Plain Brass

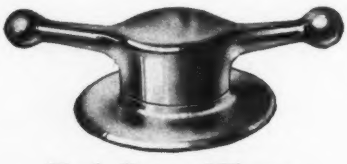
This fixture can be used with standard lead pipe connections.

Stock No.	*Size Pipe*	*Price*
6020	½ in.	$1.10
6021	¾ in.	1.50
6022	1 in.	2.15
6023	1¼ in.	2.40
6024	1½ in.	3.10
6025	2 in.	3.70

Streamline Gas Tank Cap

Designed to prevent accidents by protecting the fuel with a double cover. Consists of a base held securely to deck by a lock ring threaded for pipe and a threaded cap with hinged cover for top of pipe. 2 in. pipe sizes stocked.

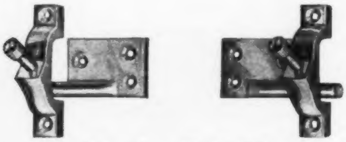
					Prices	
Lgt.	*Wd.*	*Hgt.*	*Wgt.*	*Stock No.*	*Polished Brass*	*Nickel Silver*
6 in.	4 in.	1¼ in.	1¾ lbs.	6043	$5.00	$5.50



Tank Cap and Flange

Polished Brass

Size Pipe	*Width Over All*	*Diam. Flange*	*Weight per Set*	*Stock No.*	*Price per Set*
1½ in.	6½ in.	3¾ in.	1¼ lb.	6040	$3.00
2 in.	6¾ in.	4¾ in.	2½ lb.	6042	4.50

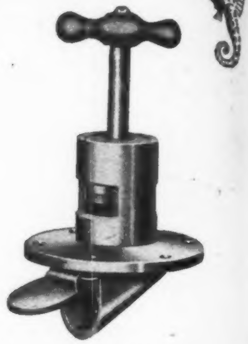


Combination Sash Hinge

Fitted with knurled head screws which lock window when closed and also serve as anti-rattlers.

Set consists of right and left spuds and two brackets fitted with adjusting screws.

Dimen. Spud Base	*Dimen. Bracket Base*	*Weight per Set*	*Stock No.*	*Price per Set*
1x1½ in.	1½x2¼ in.	⅜ lb.	1918	$1.50



Bilge Bailer

Brass

Handy fitting for runabouts and speedboats. When running, bilge water can be drained by opening valve.

Height Over All	*Diam. Flange*	*Weight*	*Stock No.*	*Price*
5½ in.	3½ in.	2¼ lbs.	6059	$7.00

Iron Pipe Size Deck Plate

Polished Brass

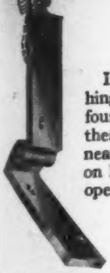
Pipe Size	*Diam. Plate*	*Weight*	*Stock No.*	*Price*
¾ in.	2½ in.	11 oz.	1930	.70
1 in.	2¾ in.	14 oz.	1931	.80
1¼ in.	3⅜ in.	17 oz.	[illegible]	1.10
1½ in.	3⅝ in.	18 oz.	[illegible]	1.30
2 in.	4⅜ in.	2 lbs.	1934	1.70

Regular Deck Plate

Polished Brass

Diam. Opening	*Diam. Flange*	*Weight*	*Stock No.*	*Price Each*
3 in.	4⅞ in.	1½ lbs.	1940	$1.80
4 in.	6 in.	1¾ lbs.	1941	2.50
5 in.	7⅛ in.	3 lbs.	1942	4.50
6 in.	8¼ in.	4¼ lbs.	1943	5.20

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.



Hatch Hinge

Polished Brass

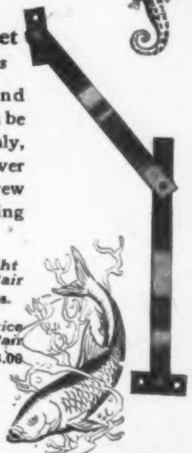
Instead of using piano hinge, hatch is trimmed on four sides with moulding and these hinges are fitted underneath. Offset raises moulding on hatch clear of deck when opened.

Length	*Width*	*Stock No.*	*Price per pair*
2¾ in.	1⅜ in.	9052	$2.50

Hatch Handle

Polished Brass or Nickel Silver

Lgth.	*Height*	*Weight*	*Stock No.*	*Nickel Silver*	*Brass*
5 in.	1⅛ in.	6 oz.	9054	$1.00	$0.90



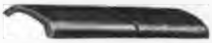
Hatch Bracket

Extruded Brass

Very simple and noiseless. Hatch can be closed by pushing only, without reaching over to loosen locking screw or lifting supporting bar.

Length When Closed	*Weight per Pair*
10 in.	2 lbs.

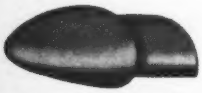
Stock No.	*Price per Pair*
9056	$3.00



Fender Moulding Couplings

Cast brass to fit inside moulding joint. Small size fits 1 in. moulding 9058. Large size fits 1¼ in. moulding 9057.

Length	*Stock No.*	*Price*
2½ in.	9060	$0.20
3 in.	9061	.30



Fender Moulding Ends

Polished Brass or Nickel Silver

One inch size fits 9058 moulding. 1¼ in. fits 9057 moulding.

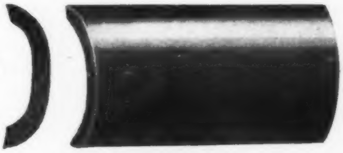
Length Over All	*Width Over All*	*Stock No.*	*Nickel Silver*	*Brass*
2½ in.	1 in.	9062	$0.45	$0.40
3 in.	1¼ in.	9063	.65	.60

Hatch Moulding

Brass

This type moulding makes a very neat installation as it is fastened to edge of hatch and does away with exposed screw heads such as are used with flat brass trim.

Width	*Projection from Deck*	*Weight per Foot*	*Stock No.*	*Price per Foot*
¾ in.	⅛ in.	9 oz.	9050	$0.50

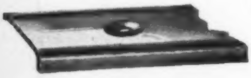


Fender Moulding

Brass or Nickel Silver

Moulding is extruded brass and hollow. Shaped with flat section so that edges of screw head will not project. Contact edges are tapered so they will imbed themselves making neat fit.

Width	*Projection*	*Weight per Foot*	*Stock No.*	*Nickel Silver per Foot*	*Polished Brass per Foot*
⅝ in.	⅛ in.	¼ lb.	9059	$0.35	$0.20
1 in.	5/16 in.	⅓ lb.	9058	.60	.35
1¼ in.	⅜ in.	¾ lb.	9057	.75	.60



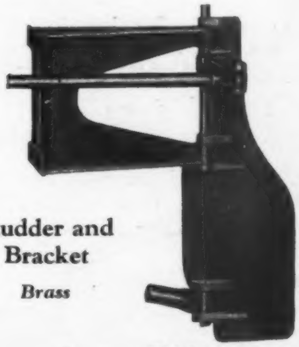
Linoleum Moulding

Polished Nickel Silver

A heavy moulding for decks and cabin floors. Lays snug and tight leaving no recesses to catch dirt. Counter sunk holes for No. 5 flat or oval head wood screw.

Width	*Stock No.*	*Price per Foot*
⅝ in.	9065	$0.18

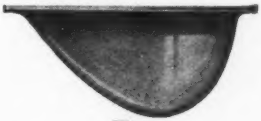
151 Class and Hydroplane Equipment



Rudder and Bracket

Brass

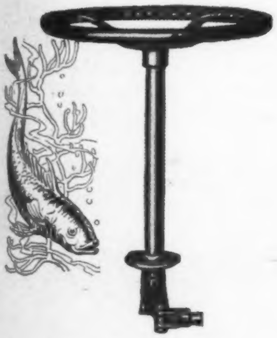
Dimensions Fastening Surface	*Distance C-L Shaft to Base of Bracket*	*Weight Including Inside Brace*	*Stock No.*	*Price*
9¼ in. x 6 in.	10 in.	36 lbs.	404	$50.00



Fin

Brass

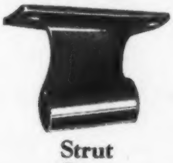
Dimen. Blade	*Dimen. Base*	*Weight*	*Stock No.*	*Price*
7x5½ in.	9x2 in.	3½ lbs.	403	$4.00



151 Class Steerer

Brass with Husted Rubber Wheel

Diameter Wheel	*Length Column*	*Weight*	*Stock No.*	*Price*
16¾ in.	17 in.	10 lbs.	401	$20.00



Strut

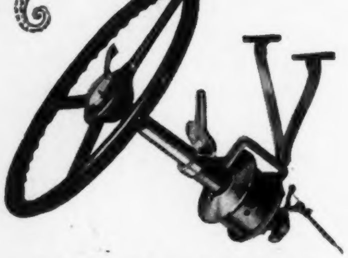
Brass

Dimensions Base	*Weight*	*Stock No.*	*Price*
5 in. x 2½ in.	3 lbs.	402	$8.00

Dodge Runabout, Kainer Equipped

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

Outboard Equipment



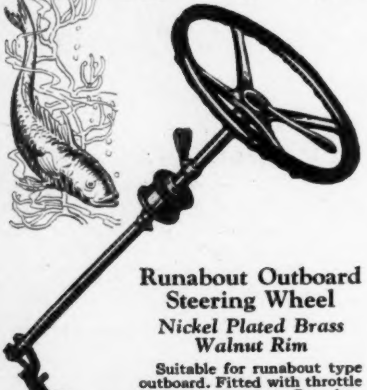
Outboard Steering Wheel

Bulkhead Type

Nickel Plated Brass—Single Control

Genuine Husted hard rubber wheel and spider on one piece steel core. Equipped with gasoline throttle control and hard rubber horn button. All bronze exposed parts nickel plated. Fitted with rigid bulkhead brackets and under deck braces. Bowden wire and fittings included.

Diameter Wheel	*Weight*	*Stock No.*	*Price*
16¾ in.	17 lbs.	708	$18.00



Runabout Outboard Steering Wheel

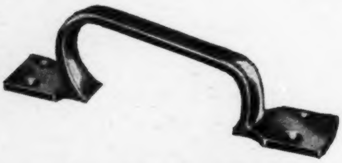
Nickel Plated Brass
Walnut Rim

Suitable for runabout type outboard. Fitted with throttle control and cutout. Complete with Bowden Wire and fittings. Brackets adjustable. As illustrated.

Diam. Wheel	*Length Over All*	*Weight*	*Stock No.*	*Price*
16 in.	31 in.	10 lbs.	780	$16.00

Same also furnished with short column without foot casting.

Weight	*Stock No.*	*Price*
9 lbs.	781	$16.00



Outboard Lifting Handle

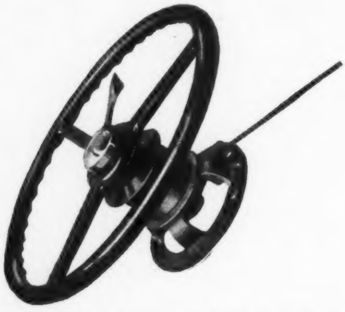
Cast Aluminum

Dimensions Base	*Height*	*Weight*	*Stock No.*	*Price*
1⅝x7 in.	2 in.	¼ lb.	724	$1.00

Outboard Tiller Rope Guide

Polished Aluminum or Brass

Dimensions Base	*Height*	*Stock No.*	*Price*
¾x1½ in.	⅝ in.	720	$0.35



Racing Outboard Steering Wheel

Aluminum with genuine Husted hard rubber wheel and spider, on one piece steel core. This wheel is built to withstand the shocks and strains of the most severe use. Impervious to acids, alkalines, greases, etc., as well as all weather conditions. Fitted with gasoline throttle control and cutout. Furnished complete with Bowden wire and fittings.

Diameter Wheel	*Weight*	*Stock No.*	*Price*
16¾ in.	8¾ lbs.	704	$15.00

Outboard Steering Rope Block

Polished Brass

Dimensions Base	*Dimensions Sheave*	*Stock No.*	*Price*
⅝x2¼ in.	⅝x1 in.	722	$0.80

Swivel Steering Rope Block

Polished Brass

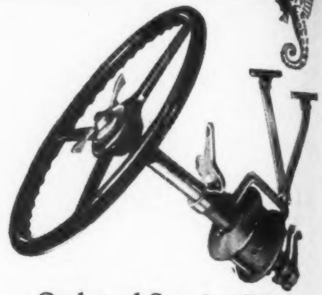
Dimensions Base	*Dimensions Sheave*	*Stock No.*	*Price*
¾x2 in.	⅝x1 in.	742	$0.90

Outboard Steering Rope Pulley

(Link Type)

Hard rubber pulley. Brass sheave. Diameter of pulley, 1⅞ in. to fit 3/16 in. wire tiller rope. Brass flange eye.

Stock No.	*Price*
732	$1.00



Outboard Steering Wheel

Bulkhead Type

Nickel Plated Brass—Double Control

Suitable for inboard or outboard boats. Genuine Husted hard rubber wheel and spider on one piece steel core. Equipped with gasoline throttle and spark controls, and hard rubber horn button. Bronze exposed parts nickel plated. Fitted with rigid bulkhead brackets and under deck braces. Bowden wire and fittings included.

Diameter Wheel	*Weight*	*Stock No.*	*Price*
16¾ in.	17 lbs.	709	$18.00

Outboard Steering Rope Pulley

(Snap Type)

Hard rubber pulley moves noiselessly in brass sheave and prevents wear on tiller line. Diameter of pulley, 1⅞ in. to fit 3/16 in. wire tiller rope. Snap hook.

Stock No.	*Price*
731	$1.00

Outboard Bow Plate

Cast Aluminum

Dimensions Base	*Weight*	*Stock No.*	*Price*
4x4½ in.	3 oz.	705	$1.00

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

Outboard Equipment

Outboard Flagpole and Stern Light

Polished Brass

Made entirely of brass with Fresnal globe. Wired complete.

Height	*Weight*	*Stock No.*	*Price*
18 in.	2 lbs.	6008	$7.00

Outboard Flagpole and Stern Light

Mahogany

Highly finished mahogany pole, Fresnal globe, wired complete. Fits No. 745 socket.

Height	*Weight*	*Stock No.*	*Price*
26 in.	2 lbs.	755	$5.00

Outboard Flagpole

Mahogany

Height	*Diam. Base*	*Stock No.*	*Price*
17 in.	⅝ in.	711	$1.00
17 in.	1 in.		1.25

Upright Bow Flagpole Socket

Polished Brass or Aluminum

Diam Base	*Diam. Hole*	*Stock No.*	*Price*
1⅞ in.	¾ in.	707	$0.60

Flush Stern Flagpole Socket

Polished Brass or Aluminum

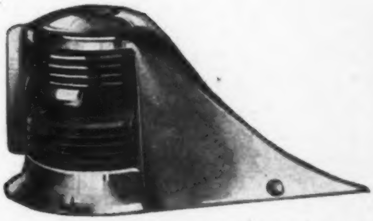
Diam. Hole	*Stock No.*	*Price*
¾ in.	745	$0.60

Bowden Wire Clamp

Plain Brass

A convenient connecting device for Bowden wire and copper tubing.

Height	*Base*	*Stock No.*	*Price*
1⅞ in.	1x1½ in.	723	$0.50

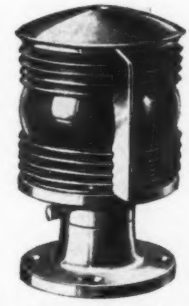


Erico-Kainer Outboard Combination Streamline Light

Polished Brass or Nickel Silver

Large size fitted with Class One lenses. A very desirable fitting on any type of outboard or inboard up to 26 feet. Medium and small sizes have outboard lenses suitable for all outboard boats.

Dimen. of Base	*Hgt.*	*Weight*	*Stock No.*	*Prices Pol'd Brass*	*Prices Nickel Silver*
3½x6 in.	3 in.	2 lbs.	715	$5.00	$5.50
3¾x7¼ in.	4 in.	2¼ lbs.	716	6.00	6.50
4½x9 in.	4½ in.	3½ lbs.	717	10.00	10.50

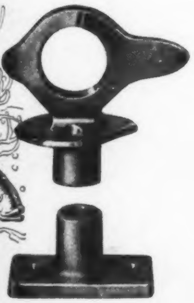


Outboard Combination Light

Polished Brass

An attractive fixture fitted with regulation red and green lenses. Fixtures can be removed by loosening screws.

Diam. Base	*Height*	*Weight*	*Stock No.*	*Price*
3½ in.	6¾ in.	3 lbs.	6006	$8.00



Combination Lifting Ring and Cleat

Polished Brass

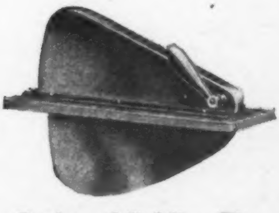
Latest design lifting ring with base for fastening to keel of boat. Cleat and base tapped ⅝ in. standard thread.

Length Over All	*Dimensions of Base*	*Stock No.*	*Price*
3¾ in.	3x1½ in.	706	$2.50

Outboard Fin

Cast Aluminum

Dimen. Base	*Height Blade*	*Weight*	*Stock No.*	*Price*
2x9 in.	7 in.	1¼ lbs.	703	$3.00



Outboard Folding Fin

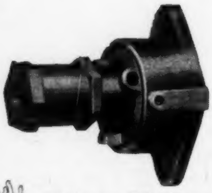
Cast Aluminum

This water-tight stabilizing fin is easily drawn entirely up into boat when landing, by means of the lever, without permitting water to enter. Can be set in any position.

Dimen. Base	*Height*	*Weight*	*Stock No.*	*Price*
2x14 in.	14 in.	4 lbs.	728	$8.00

All polished items can be furnished in Chromium plate for 25% more than polished brass prices. Discount deductible from total.

Propeller Shaft Equipment



Erico-Kainer Universal Stuffing Box

(Cummins Patents, U. S. and Canada)

Improved Type

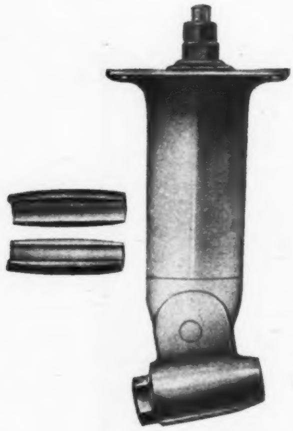
When this fitting is bolted in place in merely approximate alignment, perfect alignment of shaft bearing is readily adjusted without disturbing fastening surface. The feature which makes this possible is a ball joint in sliding plates, permitting not only change of angle of shaft bearing to fastening surface but also the movement of the point of bearing itself in any direction, up or down, right or left. Both this radial and lateral action are securely locked by a single cap nut.

As will be seen, this not only simplifies the initial installation but makes possible the easy readjustment to perfect alignment which becomes necessary from time to time through change in the relative positions of the parts of a boat through sag or strain.

Made entirely of best bronze bearing metal.

Bored for Shaft	*Dimensions of Base*	*Weight*	*Stock No.*	*Price*
⅝ in.	3½x5½ in.	5½ lbs.	4571	$12.00
¾ in.	3½x5½ in.	5½ lbs.	4572	12.00
⅞ in.	3½x5½ in.	5½ lbs.	4573	12.00
1 in.	3½x5½ in.	5½ lbs.	4574	12.00
1⅛ in.	3½x5½ in.	6 lbs.	4575	13.00
1¼ in.	3½x5½ in.	6 lbs.	4576	13.00
1⅜ in.	4 x7 in.	8 lbs.	4577	16.00
1½ in.	4 x7 in.	8 lbs.	4578	16.00
1⅝ in.	5½x9 in.	22 lbs.	4579	30.00
1¾ in.	5½x9 in.	22 lbs.	4580	30.00
1⅞ in.	5½x9 in.	22 lbs.	4581	35.00
2 in.	5½x9 in	22 lbs.	4582	35.00

Corsair Cruisader, Kainer Equipped



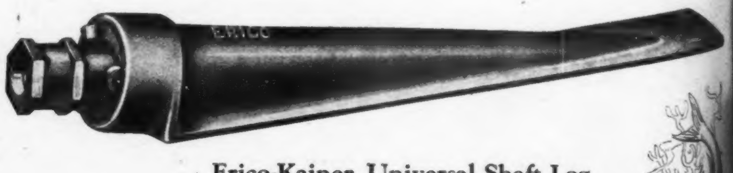
Universal Strut

Improved Type

Improved type universal strut has many advantages. Fitted with two-piece bearing, which can be replaced without removing strut or shaft. These bearings strut, which is tapered on the inside and then drawn up by a tapered sleeve, which in from the aft end. This strut meets the demand also for a stock fitting, as it the delay and expense of designing a special strut and making patterns. The proper of strut is obtained by sawing off the upper casting to suit. Stock strut measures from base to center line of shaft bearing. The bearing itself is self-aligning as to Made entirely of cast bronze and streamline designed. The main casting being is lighter than the average strut and is more substantial. Price includes babbitt

Bored for Shaft	*Dimensions of Base*	*Weight*	*Stock No.*
¾ in.	7x3½ in.	11½ lbs.	7001
⅞ in.	7x3½ in.	11½ lbs.	7002
1 in.	7x3½ in.	11½ lbs.	7003
1⅛ in.	7x3½ in.	11½ lbs.	7004
1¼ in.	7x3½ in.	11½ lbs.	7005
1⅜ in.	7x3½ in.	12½ lbs.	7006
1½ in.	7x3½ in.	12½ lbs.	7007

Rubber bearings also sold separately. Prices on application.



Erico-Kainer Universal Shaft Log

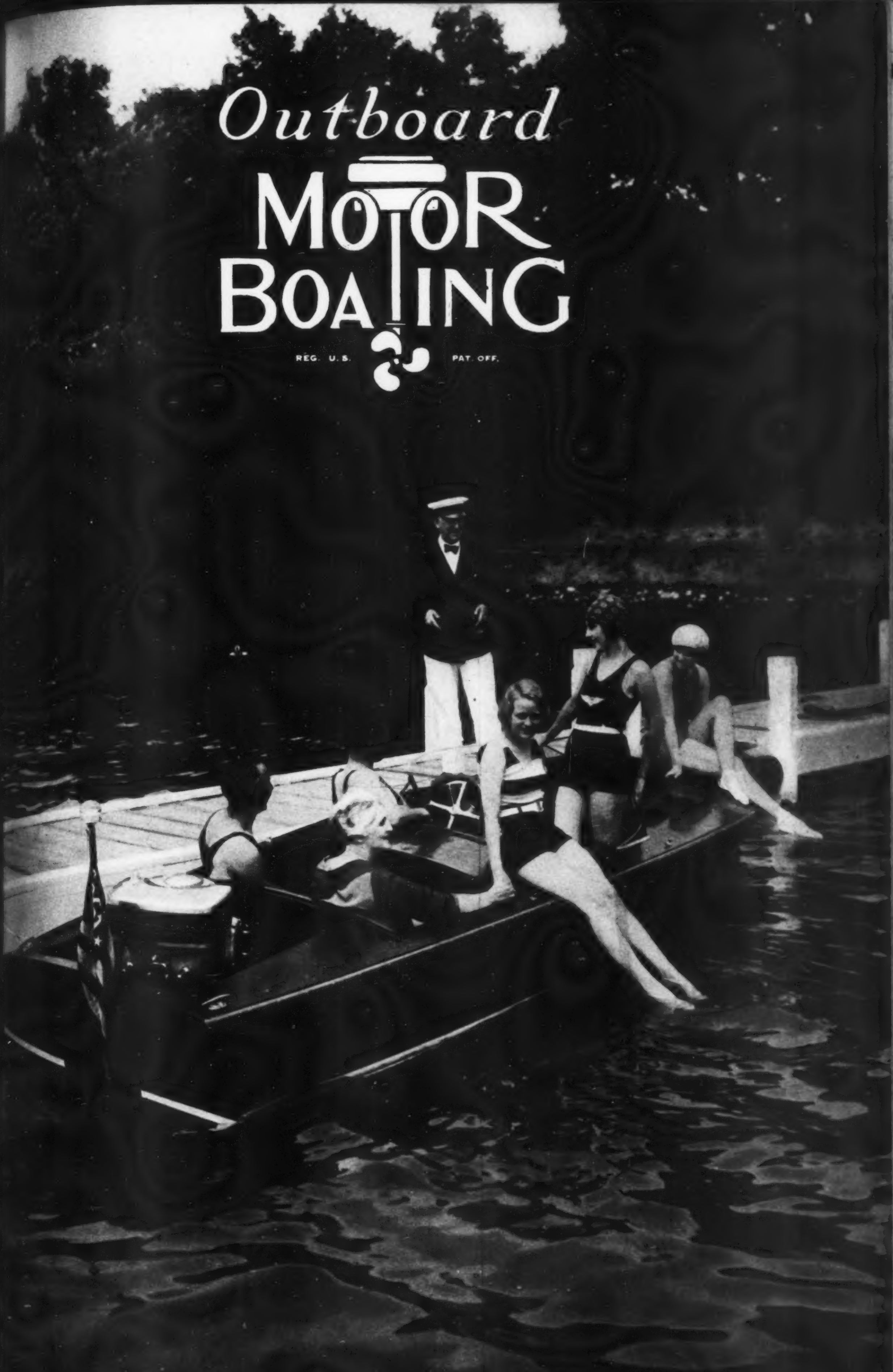
All Bronze

The Erico-Kainer Shaft Log has been greatly improved in that it is now Housing that holds bearing is equipped with alemite fitting so that it can grease. Bearing itself is tapped with holes which allow grease to lubricate

Bored for Shaft	*Dimensions of Base*	*Weight*	*Stock No.*
¾ in.	18x3¾ in.	10 lbs.	4584
⅞ in.	18x3¾ in.	10 lbs.	4585
1 in.	18x3¾ in.	11 lbs.	4586
1⅛ in.	18x3¾ in.	11 lbs.	4587
1¼ in.	18x3¾ in.	11 lbs.	4588
1⅜ in.	25½x3¾ in.	16 lbs.	4589
1½ in.	25½x3¾ in.	16 lbs.	4590
1⅝ in.	33½x5½ in.	36 lbs.	4591
1¾ in.	33½x5½ in.	36 lbs.	4592
1⅞ in.	33½x5½ in.	38 lbs.	4593
2 in.	33½x5½ in.	38 lbs.	4594

Outboard MOTOR BOATING

REG. U.S. PAT. OFF.



Oilzum
America's
Finest
Oil

Your motor will appreciate the real lubrication that OILZUM Motor Oil gives.

Lubrication is the one thing that determines the life of a motor, and with OILZUM your motor will run farther and better.

OILZUM is the cream of 100% pure paraffine base Pennsylvania Oil. It is strictly a pure filtered oil.

OILZUM is a little higher in the price per gallon but lower in cost per mile. It returns great dividends in reducing oil consumption and giving longer life to marine motors.

It is a proven economy to insist upon OILZUM.

If motors could speak we
wouldn't need to advertise.

THE WHITE & BAGLEY COMPANY, Worcester, Mass.

Oilzum
MOTOR OILS
LUBRICANTS

Oilzum

America's Finest Oil

Outboard MOTOR BOATING

Fifty-Seventh St. at Eighth Ave.,
New York, N. Y.

Edited by
CHARLES F. CHAPMAN

FEBRUARY, 1930

MOTOR BOAT SHOW NUMBER

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SEA SLEDS—DRY AND SAFE

Six attractive models comprise the Sea Sled line for 1930—three inboard and three outboard. The inboards are 22, 26 and 28 feet in length, built in both open and sedan types while the outboard group consists of an open 13, open 16 and 18-foot sedan express cruiser.

Sea Sleds retain the characteristic lines on which their reputation for fast, comfortable, safe and dry carrying capacity has been based with numerous improvements which contribute to smarter appearance, extreme comfort, seaworthiness and economy of operation.

The model 22 is a new addition to the Sea Sled fleet; with beautiful curves blended into a streamline design which suggests power and permits her to slip quietly and easily through the roughest of seas, without pounding and a noticeable absence of wetting spray. Two close-coupled cockpits provide seating capacity for six and a speed of 30 miles an hour is attained with a 110 h.p. motor.

Luxury, comfort and safety are the salient characteristics of the new three-cockpit 26-footer. Workmanship and finish are carried to a very fine degree, resulting in a beautiful, graceful and trim craft. The 26 carries a load of ten passengers at speed, making 42 m.p.h. with her 200 h.p. Kermath engine.

Largest of the line is the model 28, a powerful craft of astonishing capabilities. A 200 h.p. Hall-Scott motor drives this model 38 m.p.h. and provides flexibility of control and operation beyond all expectations.

An express cruiser 18 feet in length distinguishes the outboard models. An outboard motor of 25 h.p. will furnish a speed of 27 m.p.h. carrying two passengers. Half of the cockpit is covered with a sliding demountable day cabin which slides forward to meet the windshield in bad weather or aft in good weather. If desired it may be removed completely. Cruising accommodations are provided with bunks for two, toilet, kitchenette and food locker.

Model 16 incorporates a new re-designed bottom which makes her just about as safe as a boat can be made with extreme power in rough water at high speed. All mahogany throughout with the exception of a white oak keel, she is a handsome model of striking beauty.

The 13-footer, smallest of the line, is still produced and maintains its reputation as a consistent winner in outboard competition, particularly where extreme seaworthiness is a factor. Speeds of 30 miles an hour will be possible with the new motors.

**Fastest Official
Outboard Speed Ever Made**

49.34 M. P. H.

Made by H. G. Ferguson driving a
CRANDALL COMET

Fourteen-year-old "Billy" Lyon, who broke all B and C class speeds, is shown here in one of the 1930 Comets.

43.94
CLASS B, DIV. 2
"CRANDALL COMET C3"
driven by
CHARLEY HOLT

43.97
CLASS B, DIV. 1
"BABY BRONTOSAURUS II"
a Crandall Comet
driven by
"BILLY" LYON

47.156
CLASS D, DIV. 1
Made by "BILLY" LYON

1930 CRANDALL COMETS

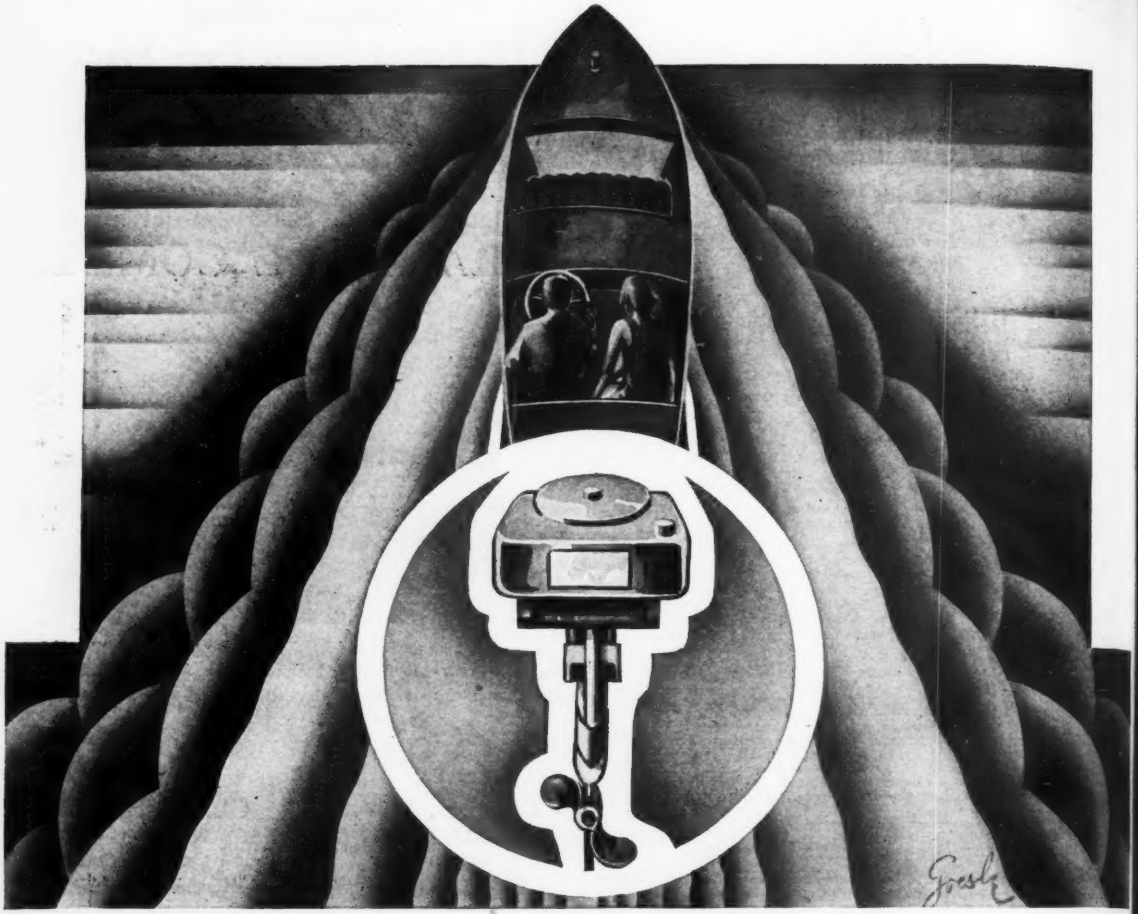
For classes A, B and C are now ready for delivery. ModelB-C (150 lbs.) is the 1930 model of the boat that H. G. Ferguson used to set the Class D record at 49.47 and "Billy" Lyon used to set the class B and C record at 43.97.

COMPLETE "CRANDALL CRAFT" LINE FOR 1930

Crandall Comet—Model A.........................115 lbs.
Crandall Comet—Models B-C......................150 lbs.
Crandall Comet—Model D-E (for rough water)....225 lbs.
Crandall Craft 15-ft. Outboard Runabout (a safe low-priced family boat for all around use)
Crandall Craft 15½-ft. Ocean-going Outboard Runabout
Crandall Craft 19-ft. Outboard Runabout
Crandall Craft 19-ft. Sedan Cruiser
Crandall Craft 15½-ft. Inboard Runabout
Crandall Craft 22-ft. Inboard Runabout

Write for the Crandall Craft Bulletin

CRANDALL BOAT CO.
NEWPORT BEACH, CALIFORNIA
Phelps *Wisconsin*



More speed for the boat—less strain for the shoulder

Now all the allure and romance of the water is yours. Speed is yours. Speed from a mite of a motor that you can pick up and carry without straining your back and your shoulders. » » Scoot through the water at ten to forty miles an hour. Tie up at the dock and pull out this midget motor that has a giant's power with a pigmy's weight, carry it away with you as though it were a traveling bag. » » The outboard motor, the modern miracle of motor boating, owes its very existence to the strong, light Alloys of Alcoa Aluminum. They, and they alone, have made possible its propelling power of many horses in vest pocket size. » » Strong to bear burdens, light to move, Alloys of Alcoa Aluminum bring light weight construction without sacrifice of strength have had a big share in giving countless thousands the thrill of high adventure on river, lake or bay

ALUMINUM COMPANY *of* AMERICA, 2487 Oliver Building, PITTSBURGH, PA. Offices in 19 Principal American Cities

ALCOA ALUMINUM

FEBRUARY Outboard MOTOR BOATING 1930

V. KLOUDA

Mrs. Otocska in her Elto equipped runabout on the River Danube in Czecho Slovakia

OUTBOARD BOATING IN EUROPE

Growth of Popular Sport Fostered by Heavy Export of Engines from the United States and Increased Production by European Builders

By J. W. SHILLAN

European Representative Elto Division O.M.C.

A QUESTION I am often asked by Outboard Motor Traders and Outboard Motor sportsmen in America, is whether Outboards are popular in Europe?

My reply is that Outboard Motor Boating this side is rapidly assuming a high degree of importance in the commercial field. Moreover, as the press in many European countries has become interested in Outboard racing, this new sport is finding favor with young sportsmen and sportswomen who are fond of the water.

To give you a better idea of the growth of Outboard sport, I cannot do better than tabulate the figures given by the American Chamber of Commerce in Washington, showing the number of American made Outboard motors which have been shipped direct from America to different countries in Europe. At the time of writing, the figures available for 1929 are from January first up to and including the thirty-first of August. On account of the very small quantities of American Outboard Motors sent to European countries during the winter months, we can assume that not more than a further 400 motors will be shipped from September first up to December 31, 1929, making a grand total of approximately 4,749 American Outboard Motors exported to Europe during 1929.

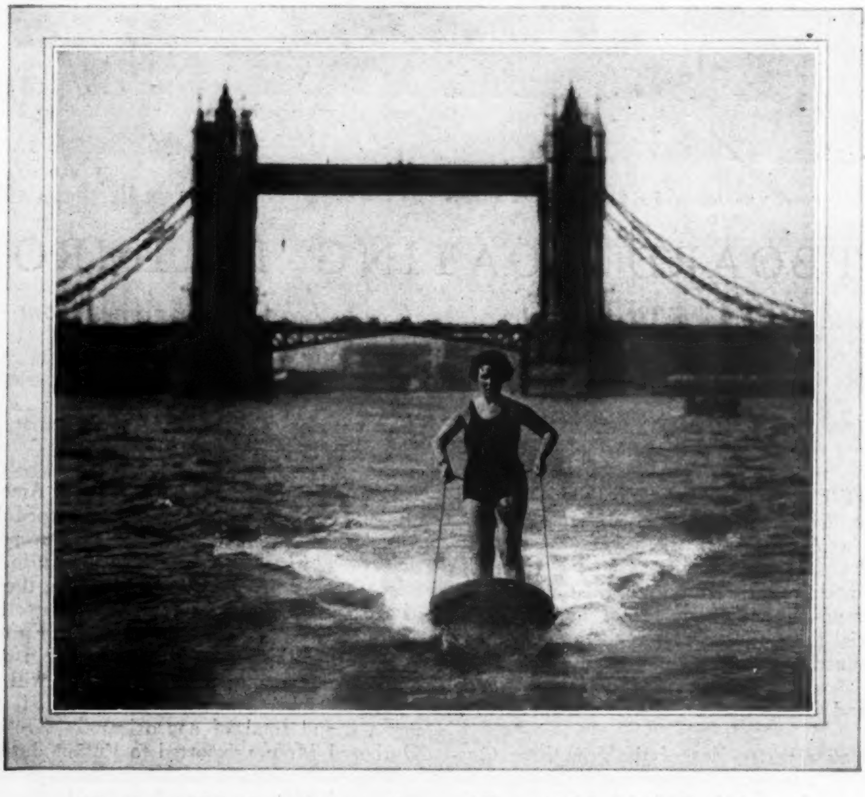
This is very nearly double the quantity of American Outboard Motors exported during 1927:

J. W. Shillan in his boat Hustle with which he won the River Shannon championship in Ireland

NUMBERS OF AMERICAN OUTBOARDS IMPORTED INTO EUROPE

	1927	1928	8 months only 1929
Austria	—	22	26
Belgium	80	48	93
Cyprus	—	20	1
Bulgaria	—	—	2
Czecho-Slovakia	11	25	27
Denmark	17	36	34
Gibraltar	—	—	2
Esthonia	—	—	—
Finland	311	527	655
France	125	392	423
Germany	143	316	261
Great Britain	799	1340	1478
Ireland	63	—	—
Greece	14	10	9
Holland	164	173	137
Hungary	3	10	77
Italy	207	388	543
Latvia	13	15	15
Malta	—	—	4
Norway	58	43	51
Poland	19	45	40
Portugal	15	11	17
Roumania	1	2	6
Spain	77	81	91
Sweden	172	141	195
Switzerland	49	33	69
Turkey	22	22	10
Yugoslavia	16	39	28
Russia	1	3	55
TOTALS	2404	3742	4349

Now, the above figures do not, of course, constitute the total number of Outboard Motors sold in each country. There are various factors which increase



Miss Agnes Nicks, long distance swimmer, riding a surf board in the shadow of London bridge

V. A. Gustavsson, one of Sweden's most successful outboard racers

and decrease the quantities in the above table. For instance: Esthonia is shown in the above list as not having purchased any American Outboard Motors; whereas I know that a number of them have been shipped from London, England; Helsingfors, Finland; Copenhagen, Denmark and Stockholm, Sweden. It is true that these quantities were very small. Again, I know that Berlin agents for Outboard Motors have sent American Motors into a number of Baltic States, namely: Roumania, Bulgaria and Yugoslavia, while my Company in London has also sent motors into each of these countries.

There were many more Outboard Motors sold in 1927, 1928 and 1929 in Europe than are shown on the above list, because Outboard Motors are now being made in the following countries: Great Britain, France, Germany, Italy and Sweden.

It must not be supposed that European manufactured Outboard Motors are all crude and of out-of-date design. It is true that, generally speaking, American Outboard Motors are superior, but nevertheless, there are some really first class Outboard Motors being made in Great Britain and Sweden, and one French manufacturer has forged ahead of all his French rivals and produced a really up-to-date product.

I have just recently heard from influential sources that several of the largest British motor cycle manufacturers will announce their entry into the Outboard Motor field next season. These are of course the logical people for manufacturing Outboard Motors. British Motor Cycle manufacturers total about 100 factories now, and collectively they have made during the 1929 season a total of over 140,000 motor cycles, 60,000 of which were exported.

These motor cycles generally earn the reputation not only in Great Britain—but in all parts of the world—of being excellent examples of small motor engineering, and furthermore comprise all types and sizes, both two cycle and four cycle.

It must not be overlooked by American manufacturers that they may yet have to meet very severe competition from this quarter. Motor Cycle manufacturing is one of the very few industries which has reached the mass production stage in Europe. In Great Britain there is one manufacturer turning out over 30,000 motor cycles per year, and three more turning out over 20,000 motor cycles each per year; and it is these large mass production manufacturers who are, at the present time, turning their thoughts to the production of Outboard Motors.

They are doing so, because it is generally believed that the sale of motor cycles has now reached its zenith, and that the small cars which are now sold so cheaply and are so economical to run, are preferable to the motor cycle and motor cycle sidecar outfit, with the result that motor cycle sales in Great Britain are decreasing (although this state of affairs has not yet been experienced in most countries to which British motorcycle manufacturers export).

By referring back to the figures compiled by the United States Chamber of Commerce, it will readily be seen that Finland, France, Germany, Great Britain, Italy and Sweden import the greatest number of American made Outboard Motors, and all these countries (with the exception of Finland) now manufacture Outboard Motors.

From figures which I have been able to secure, I find that during 1929 Swedish manufacturers produced approximately 1,500 Outboard Motors, France 500 Outboards, Germany 1,500, Great Britain 600, and Italy 200. I believe I am right in estimating that approximately 30 per cent of these were exported from the country of manufacture.

Now the use of Outboard Motors in each country is, of course, dependent upon the amount of water available. All countries in Europe have a seaboard with the exception of Switzerland, Czecho-Slovakia, Austria and Hungary. But there are only small seaboards or very limited inland waters in the following countries: Belgium, Bulgaria, Esthonia, Latvia, Roumania and Turkey. In Great Britain we have 4,000 miles of coast line, but not so very many navigable inland waterways, whereas Finland, for instance, is a land of a thousand lakes, and there are navigable waterways everywhere. To a somewhat lesser extent the latter condition applies to Sweden, Norway, Denmark, Germany, France, Holland, Greece, Italy and Portugal. Bulgaria, Belgium and Turkey have small coast lines, and practically no inland waterways.

© Evening News, Portsmouth

A British built, Elto powered boat at Cowes, England

Bohnstedt Peterson and son, outboard pioneers on Lake Fure, Copenhagen, Denmark

© International Press Service

© Photopress, London

Miss Elsie Shillan, one of the keenest women outboard drivers in Europe with her hydroplane Tobasco

Spain, however, has a large coast line, but only a small expanse of inland waterways

The continued progress in Outboard Motor Boating is primarily due to the efforts made by local clubs, working under the jurisdiction of a national authority, such as we have at present in the United States, Great Britain, Germany, France, Belgium, Sweden, Italy, and Switzerland, also a number of other countries outside Europe, all of which belong to the International Motor Yacht Union, with its headquarters under the able direction of Mr. Pauwert of Brussels, who acts as Secretary.

Every year delegates from each country are sent to a General Meeting—which is called at Brussels to decide matters in connection with the sport and industry of Outboard Motor Boating—and arrive at agreements. Quite recently the 1929 meeting was held at Brussels, and it was then disclosed that fifteen clubs were now working under the national authority in Germany, that there was a membership of over 2,000, and that the number of boats owned by members totalled 1,100. It was furthermore announced that German competitors had raced at Brussels, Paris, London, Vienna, Venice, Stockholm and Bayonne France, during the past season. Mr. Bauer, one of the leading German sportsmen, had taken a trip to Detroit in order to be present at the September meeting there.

In Great Britain there are now twenty-one Outboard and other motor clubs working under the national authority, with a total membership of 2,361. Furthermore, English Outboard Motor competitors have visited the following International Meetings: Brussels, Paris and Berlin.

Whereas four years ago less than half a dozen regattas were held in Great Britain, this year a total of nearly 100 races has been held.

France has taken a lead from America, and, acting in a similar manner to the National Outboard Association, has split up into eight Federated Groups. These Groups control forty clubs. In Sweden we find that there are 6,000 members coming under the national authority. These members support thirty-eight clubs, and own about 3,000 boats between them.

In Switzerland there are fifteen clubs affiliated to the national authority, but I have no figures available as to the number of members.

You will see from the above facts that Outboard sport is gradually becoming organized.

I regret to learn that at the recent meeting of National Delegates of the International Motor Yacht Union in Brussels, no definite agreement was reached by America and other countries to have the cubic capacity of Motors in each class exactly the same.

About four years ago Paul Bernard on behalf of the U. S. A. agreed at a conference of the I.M.Y.U. Delegates at Brussels on the following cubic capacities for Outboard Motors:

A class up to 250 c.c.
B " " " 350 c.c.
C " " " 500 c.c.
D " " " 750 c.c.

Now, America has not adopted the metric measure-

(*Continued on page* 450)

Photographs by M. Rosenfeld

An excellent proof of organization. Group of members of the Regatta Circuit Riders Club who turned out to observe a prominent regatta

ORGANIZING FOR OUTBOARD RACING

Outboard Drivers and Boat Owners Can Further Their Mutual Interests Greatly by Proper Organization

By W. E. WILLIS

EXPERIENCE during the 1929 racing season has demonstrated to outboard clubs and associations throughout the country the need for, and the value of organization and cooperation. Carefully organized outboard meets and regattas run off on schedule time and in an orderly, systematic manner are now demanded alike by the public and the contestants. To provide regattas of this type, however, experienced organizations, fully cognizant of the public and private demands of the outboard sport and constantly willing to work in its interests are required.

To organize such a body is no easy task, as anyone who has been instrumental in forming a group of this type can readily testify. Nevertheless, it is not an impossibility and, when properly analyzed, it need not be as difficult an undertaking as it appears at first.

The nucleus of every group, whether it be a national association or a local club, is the individual member. In the final analysis he is the one who profits most from the united efforts of the whole body, therefore, it is to the best interests of all concerned to see that the right start is made toward securing the greatest possible number of interested individuals when organizing any kind of a local club. An outboard club is no exception to this rule.

In forming an outboard club the first steps are to try to find out the number of outboard enthusiasts in the vicinity, gather them together and select from among them the men who can be depended upon to be workers and actively carry on the affairs of the club. The usual procedure is to call a general meeting at a time and place most convenient for the majority. Letters or bulletins may be sent out to all those who own outboards or are interested in them, announcing the meeting and outlining what it is hoped will be accomplished and inviting them to be on hand with ideas and suggestions.

After the crowd has been gotten together, the purpose of the meeting should be fully explained in detail and a tentative working program drawn up. It should be made clear to all prospective members that the aim of an outboard club is to aid and assist each individual

Organizers of outboard racing in the east. W. E. Willis, Secretary, M. A. O. A., Frank Wigglesworth, Chairman Outboard Division, A. P. B. A., and W. Burk of the M. A. O. A.

member to greater enjoyment of the sport and that only through the wholehearted cooperation of all concerned can this be brought about.

A name can be decided upon and the officers, which consist of the Commodore, Vice-Commodore, Rear-Commodore, Secretary and Treasurer, and a Board of Directors be elected.* Once these important details of the organization have been attended to it will be possible to proceed in a business-like fashion to draw up a schedule of outboard races for the season and arrange for meets with other outboard clubs in the vicinity.

Every effort should be made by an outboard club, whether it be local or otherwise, to select those who have had experience in starting, timing, scoring, etc., to officiate at its regattas. Competent officials who can be depended upon to work are absolutely essential if outboard races are to be run off on time and in a proper fashion. These men, if they will simply follow the list of suggestions made by the Administrative Secretary for that region, should have no difficulty in pleasing not only the drivers but the public as well.

Unfortunately, enthusiasm cannot take the place of experience, but with printed literature on the subject adopted for the entire region by the regional association, it should be easy to handle the details on a business-like basis.

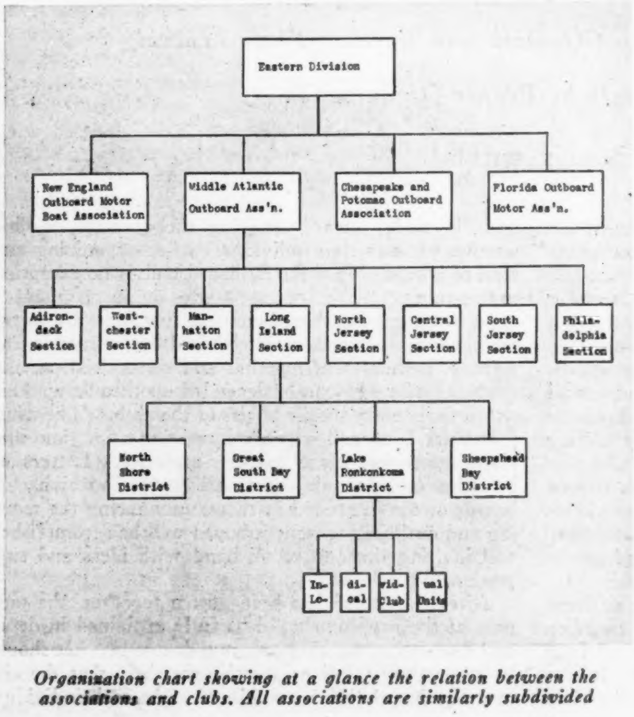
The results of all such races should be carefully and completely recorded so that accurate accounts will be available for publicity purposes afterwards in newspapers and magazines. This can only be counted upon when thoroughly competent men are selected to handle the multitude of details connected with starting, timing and scoring.

After the formation of local outboard clubs such as the one previously described, in all the towns in a given section of the country, the second step is the uniting of these local clubs into a district association, each local club being thought of as an individual link in the chain or as a unit in the district organization. Qualifications which will have to be fulfilled by a local club before it will be admitted to the district association can be worked out in detail by those interested in forming the district group. Such qualifications may be the number of members required, or the number of members who race in a certain division, or the amount of dues charged, etc.

As the number of these district associations increases they may be joined together into sectional associations. The latter organizations would all be under the jurisdiction of the regional association, who in turn would all belong to the American Power Boat Association. This scheme may seem involved at first but a typical example will serve to illustrate the manner in which it would work out in practice.

For the sake of argument let us assume that several local outboard clubs have been organized in the vicinity of Lake Ronkonkoma on Long Island. In order to foster inter-club regattas and championships, the powers that be decide to organize the Lake Ronkonkoma Out-

(*Continued on page 450*)


Eastern Division
New England Outboard Motor Boat Association
Middle Atlantic Outboard Ass'n.
Chesapeake and Potomac Outboard Association
Florida Outboard Motor Ass'n.
Adiron-dack Section
West-chester Section
Man-hatton Section
Long Island Section
North Jersey Section
Central Jersey Section
South Jersey Section
Phila-delphia Section
North Shore District
Great South Bay District
Lake Ronkonkoma District
Sheepshead Bay District
In-Lo-
di-cal
vid-Club
ual Units

Organization chart showing at a glance the relation between the associations and clubs. All associations are similarly subdivided

---

*A copy of the constitution and by-laws of the Middle Atlantic Outboard Association will gladly be furnished as a guide in drawing up a club constitution to those writing in for it to the Secretary of the M.A.O.A.

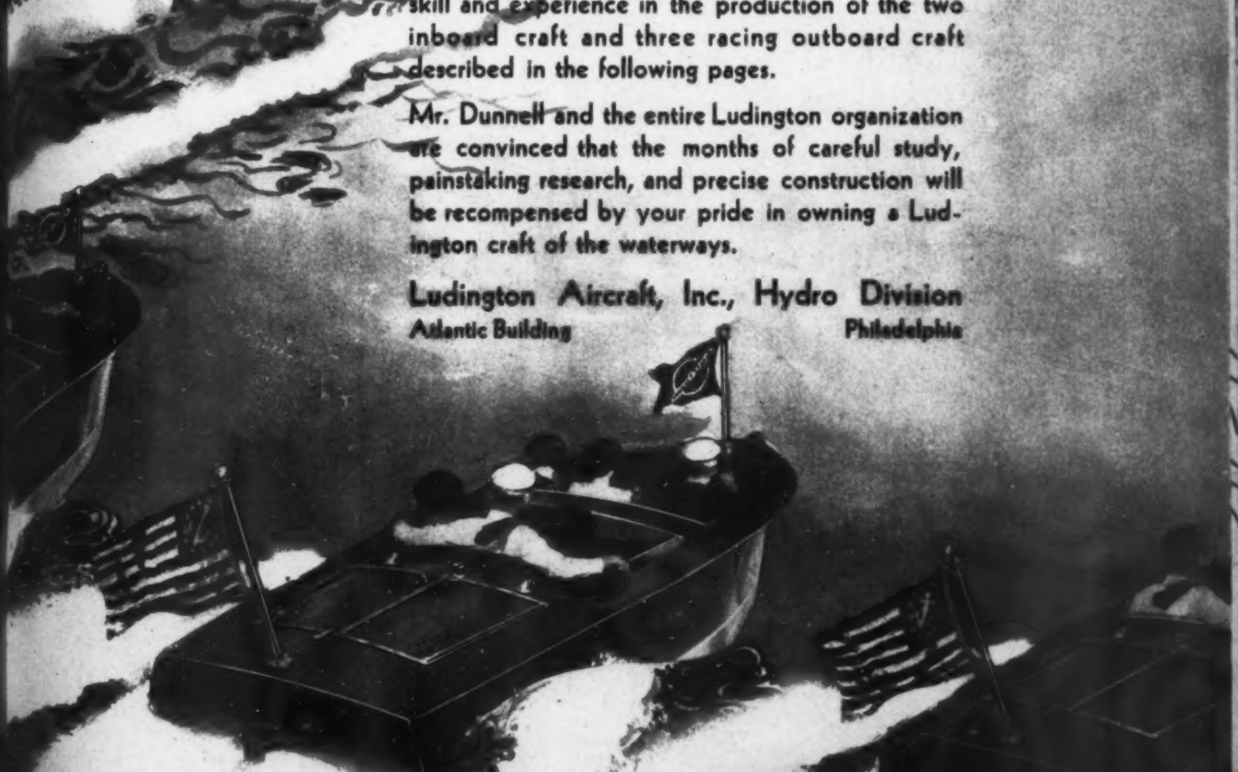
The *New* LUDINGTON CRAFT of the WATERWAYS

THE faithfulness of design and construction with which the Hydro Division of Ludington Aircraft, Inc. has endowed the racing boats which bear its name has been reflected in the long list of victories won during the past few seasons. Cup after cup bears splendid testimony to the skill of the drivers and the speed and stamina of the craft.

And now, for 1930, Ludington goes further. Mr. Jacob Dunnell, long associated with the finest in small boat design and construction, has joined the Ludington organization and has incorporated all his skill and experience in the production of the two inboard craft and three racing outboard craft described in the following pages.

Mr. Dunnell and the entire Ludington organization are convinced that the months of careful study, painstaking research, and precise construction will be recompensed by your pride in owning a Ludington craft of the waterways.

Ludington Aircraft, Inc., Hydro Division
Atlantic Building **Philadelphia**



The *New* LUDINGTON SPORTSHIP

THE SPORT CAR OF THE WATERWAYS

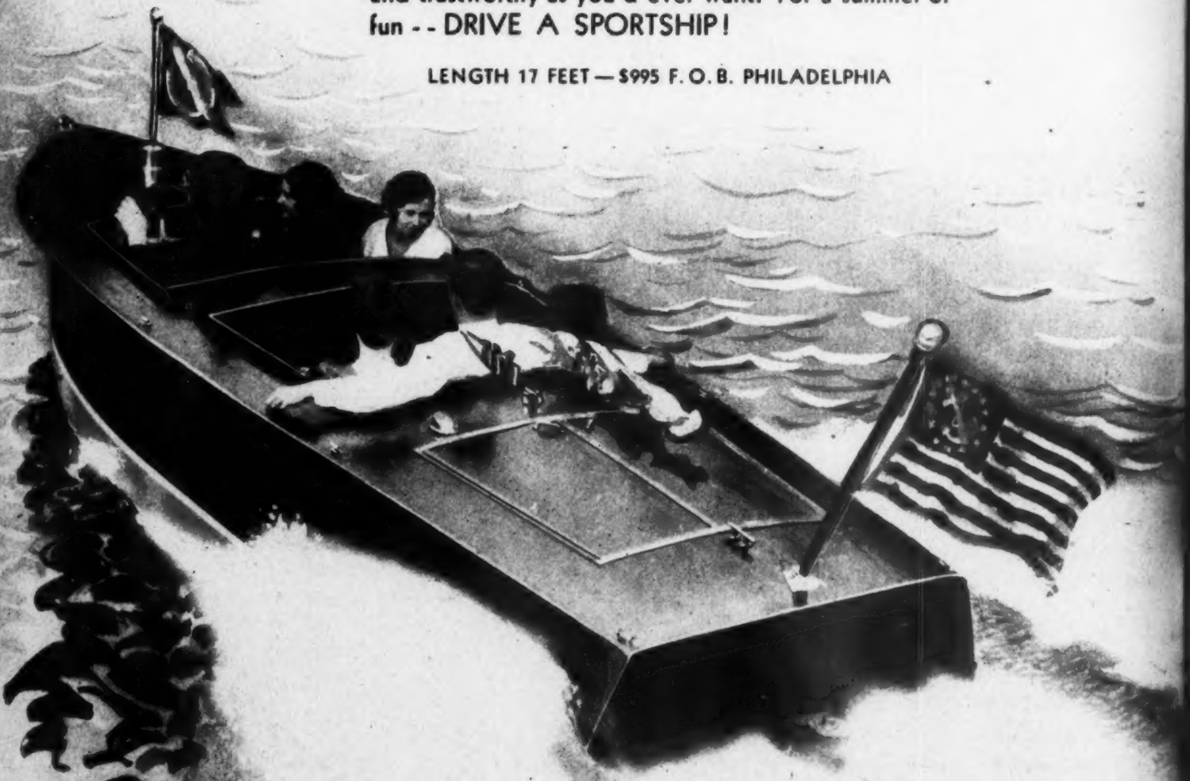
DUNNELL DESIGNED

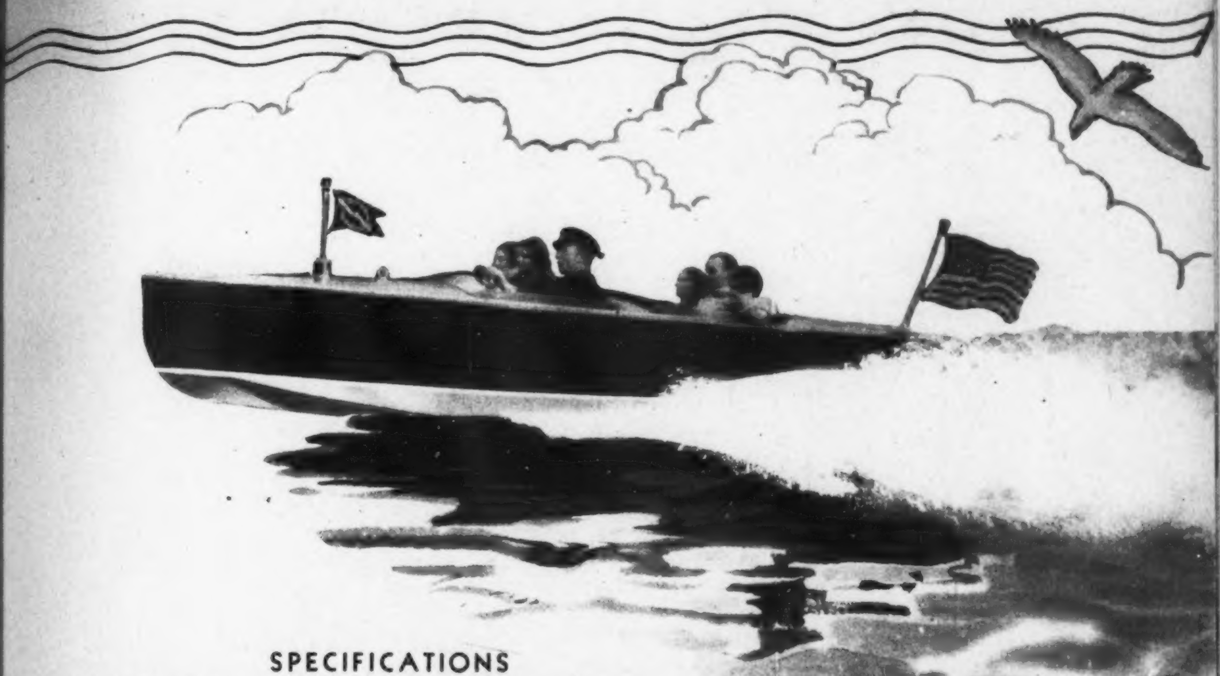
LUDINGTON leads -- with the Sportship! Seventeen feet of the trimmest, cleanest, sturdiest little craft you'll ever see. She's inboard powered -- designed and built from keel to sheerline for inboard power. Deep, roomy cockpits -- complete fittings and equipment -- reserve gas tank -- sturdy little Gray Motor, quietly purring under a closed hatch aft, self starter --

She's the boat for 1930 -- ready for you. Slip behind the wheel and cast off! Keep her throttle closed, and see how comfortably she lazies along at 8 or 10 miles an hour. Then -- give her the gas, and catch the thrill of racing waters as your Sportship skims the waves at 30 miles an hour.

The Sportship is your boat -- for you and for your friends! She's clean -- clean as a cruiser, and as dry and trustworthy as you'd ever want. For a summer of fun -- DRIVE A SPORTSHIP!

LENGTH 17 FEET — $995 F. O. B. PHILADELPHIA





SPECIFICATIONS

LENGTH OVERALL—17 feet

BEAM—62 inches

MATERIALS—Airplane Spruce, White Oak and Mexican Mahogany. Copper nails and brass screws.

FASTENINGS—Copper clinch nails and brass screws.

FINISH—Hull: two color paint. Trim: mahogany bright finish. Inside: paint.

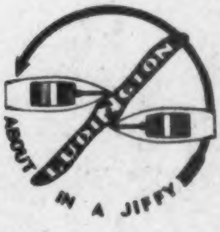
FITTINGS—All chrome plated. Bow plate, Post light, Lifting ring, Fender cleats, Ventilators, Aft cleat, Aft chocks, Stern pole light, Gas caps, Stern, between hatch and back seat, Auto type steering wheel.

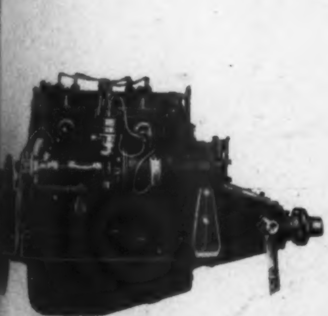
EQUIPMENT—Seat cushions, Life preservers, Fenders, Lines, Flags, Tools, Fire extinguisher, Instrument panel, Anchor, 15 gal. gas tank (lead coated welded steel). 5 gal. reserve gas tank, (can be shut on and off from front seat).

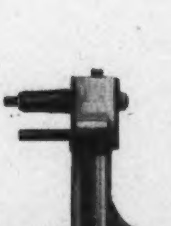
POWER PLANT—Gray Model 37 special—Equipped with electric starter, generator clutch, flame arrestor, lifting rings, etc., storage battery, tools, etc. All controls carried to forward cockpit. Gravity gasoline feed.

DRIVE UNIT—Special all-bronze unit, hardened steel bevel gear drive, roller bearings, steering mechanism inside grease-tight gear case, steering with propeller—no rudder.

LUDINGTON

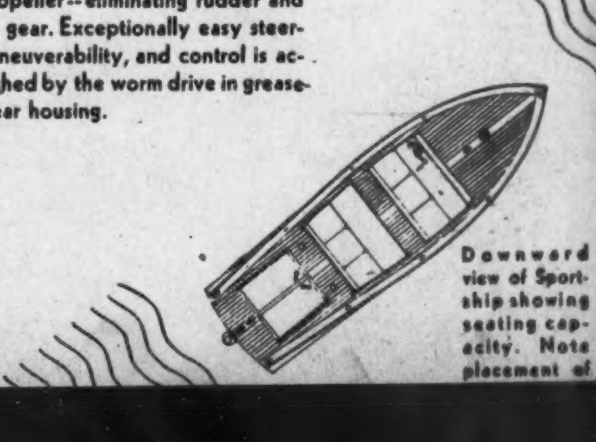






All bronze unit that steers and reverses with propeller--eliminating rudder and reverse gear. Exceptionally easy steering, maneuverability, and control is accomplished by the worm drive in grease-tight gear housing.

cylinder Gray, Model 37 Special,
ed with electric starter, generator,
lame arrester, storage battery, tools,
hosen for its ability to stand up--a reli-
edium duty motor built for continuous
mance. Can be serviced anywhere.



Downward view of Sportship showing seating capacity. Note placement of

The *New* LUDINGTON SPORTSHIP SENIOR

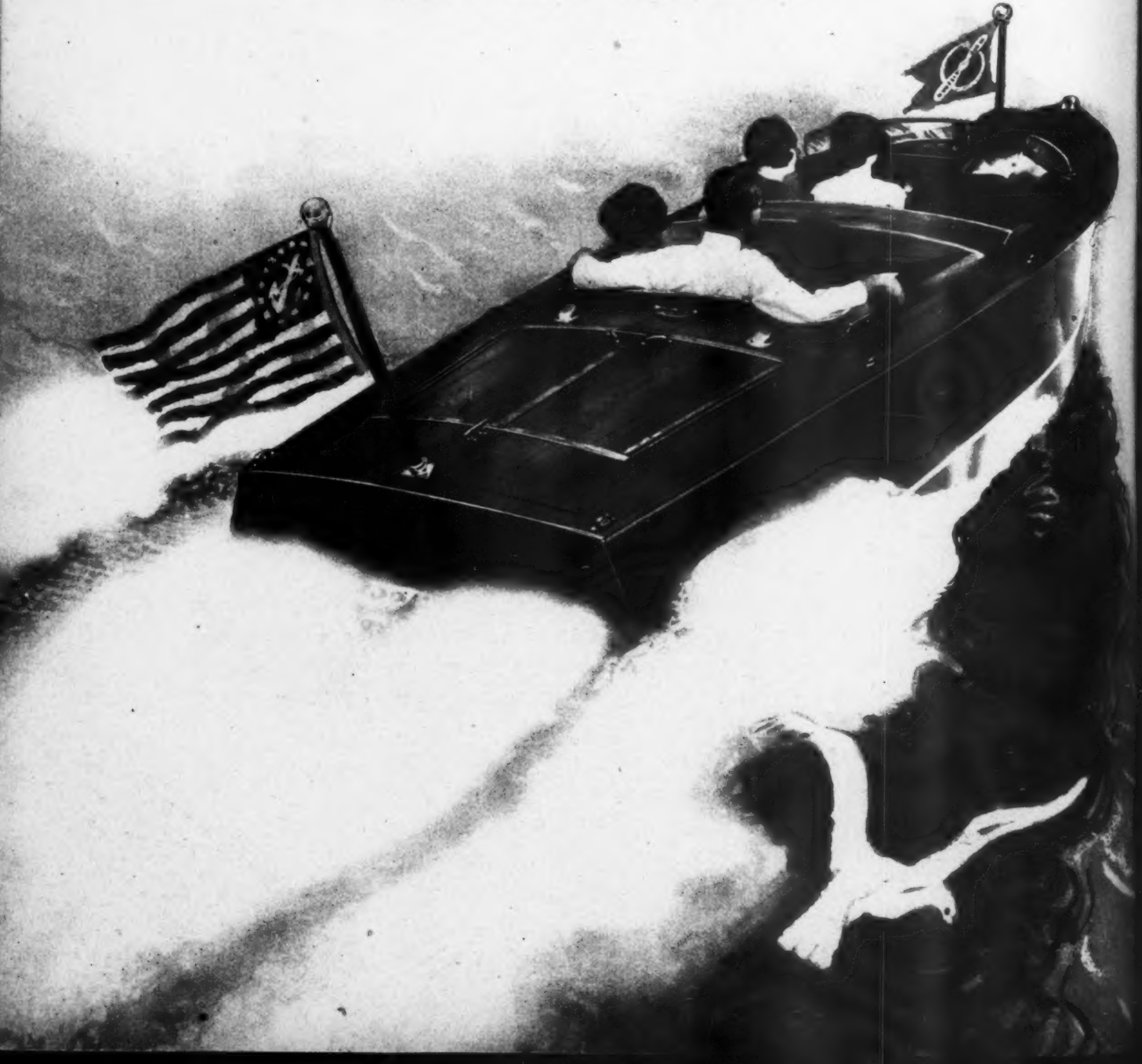
THE SPORT CAR OF THE WATERWAYS

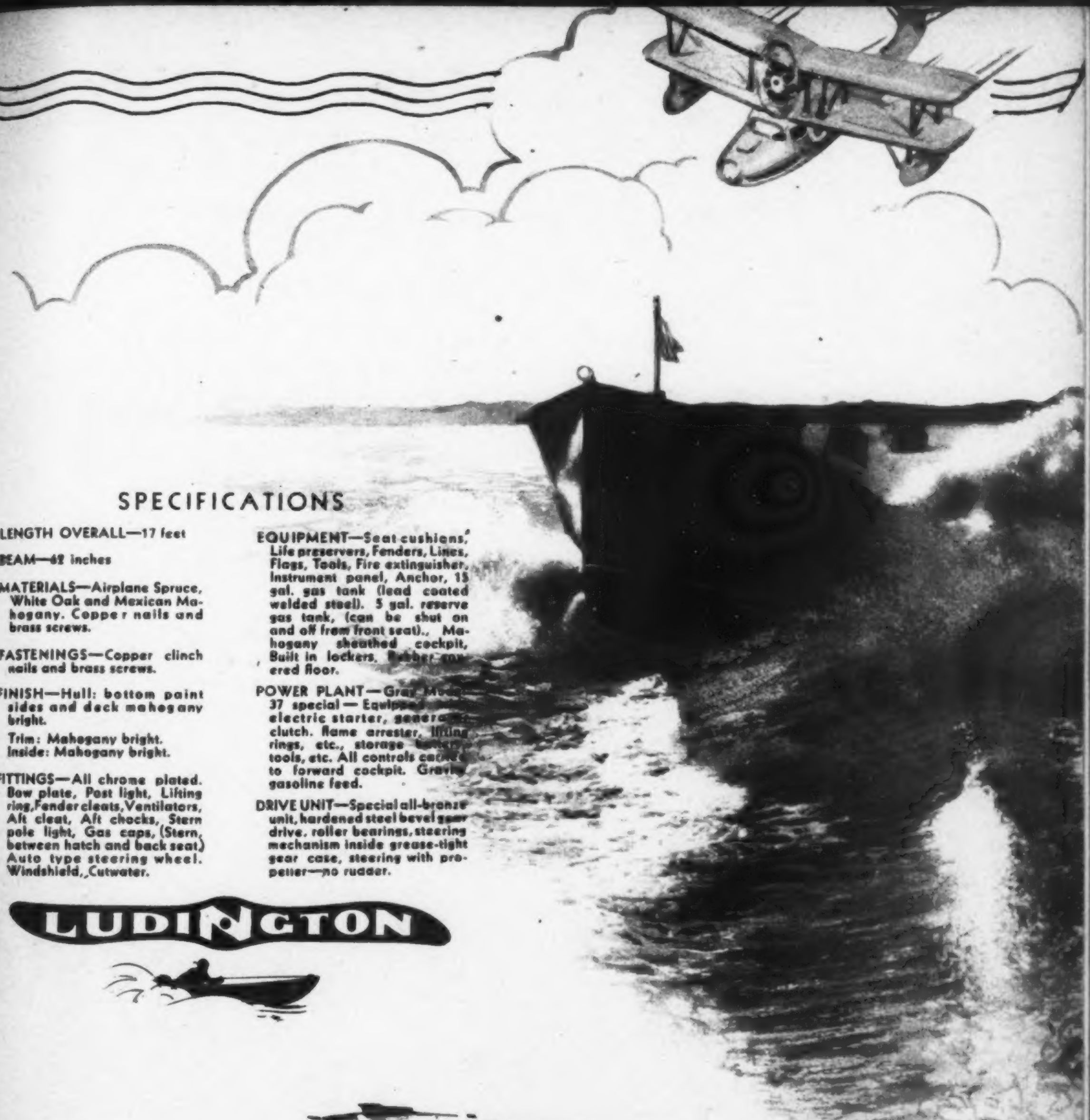
DUNNELL DESIGNED

THE Sportship Senior! Same graceful lines, same sturdy build, same comfortable cockpits for six, same covered hatch sheltering the same type of reliable Gray Motor - - the Sportship Senior is the sister ship of the Sportship - - but with refinements of construction, fittings, and equipment that duplicate the clean luxury of the most expensive runabouts - - mahogany bright inside and out, V windshield, chromium cutwater, built in lockers, rubber covered floors.

The Sportship Senior, too, is clean and dry and seaworthy. She's a thoroughbred - - the result of years of experience in designing, building, and outfitting smaller craft. You'll be PROUD of your Sportship Senior.

LENGTH 17 FEET — $1375 F. O. B. PHILADELPHIA





SPECIFICATIONS

LENGTH OVERALL—17 feet

BEAM—62 inches

MATERIALS—Airplane Spruce, White Oak and Mexican Mahogany. Copper nails and brass screws.

FASTENINGS—Copper clinch nails and brass screws.

FINISH—Hull: bottom paint sides and deck mahogany bright.

Trim: Mahogany bright.
Inside: Mahogany bright.

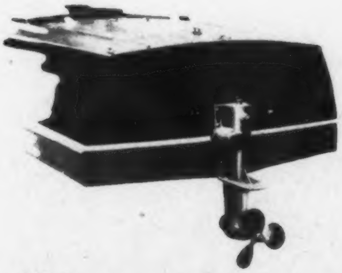
FITTINGS—All chrome plated. Bow plate, Post light, Lifting ring, Fender cleats, Ventilators, Aft cleat, Aft chocks, Stern pole light, Gas caps, (Stern, between hatch and back seat) Auto type steering wheel. Windshield, Cutwater.

EQUIPMENT—Seat cushions, Life preservers, Fenders, Lines, Flags, Tools, Fire extinguisher, Instrument panel, Anchor, 15 gal. gas tank (lead coated welded steel). 5 gal. reserve gas tank, (can be shut on and off from front seat)., Mahogany sheathed cockpit, Built in lockers, Rubber covered floor.

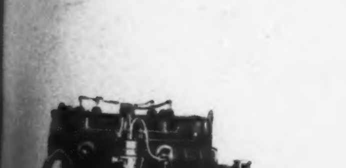
POWER PLANT—Gray Model 37 special — Equipped with electric starter, generator, clutch. flame arrester, lifting rings, etc., storage battery, tools, etc. All controls carried to forward cockpit. Gravity gasoline feed.

DRIVE UNIT—Special all-bronze unit, hardened steel bevel gear drive, roller bearings, steering mechanism inside grease-tight gear case, steering with propeller—no rudder.

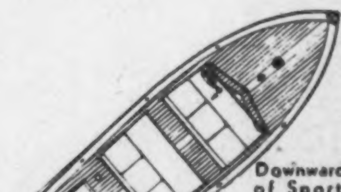
LUDINGTON



All bronze unit that steers and reverses with propeller -- eliminating rudder and reverse gear. Exceptionally easy steering, maneuverability, and control is accomplished by the worm drive in grease-tight gear housing.



Cylinder Gray, Model 37 Special,
ipped with electric starter, gener-
, clutch, flame arrester, storage
tery, tools, etc. Chosen for its
ity to stand up -- a reliable medium
y motor built for continuous per-
mance. Can be serviced anywhere.



Downward view of Sportship Senior showing seating capacity. Note placement of engine hatch and angle of V windshield

The New LUDINGTON
Speed Model for "A" Motors
LIGHTNING
THE SPEEDSTER OF THE WATERWAYS

DUNNELL DESIGNED
A CLASS, DIVISION 1, 2 B&C CLASS DIVISION 3

The one minute gun -- the clock ticks off the seconds -- down goes the flag and a streak of lightning shoots across the starting line planing instantly in answer to the sudden thrust of the motor -- the Ludington Lightning is out in front!

That's the thrill and fun you'll have in your completely redesigned Lightning. The new side construction cushions your turns -- turns that can be taken with throttle wide open. Get behind the wheel of a Lightning. Complete with steering wheel and throttle control -- ready for the motor.

LENGTH 11½ FEET—$240 F. O. B. PHILADELPHIA

SPECIFICATIONS

LENGTH OVERALL—11½ feet

BEAM—46 inches

WEIGHT—100 lbs.

MATERIALS—Airplane Spruce and 3-ply Mahogany Veneer. Rabbetted joints.

FINISH—Bottom: Graphite racing compound. Sides: Mahogany bright finish. Deck: Mahogany bright finish. Transom: Mahogany bright finish. Insides paint. Trim bright finish.

FITTINGS—Combination bow plate and lifting handle, Lifting handles aft, Steering wheel, Throttle with Bowdoin wire, Steering cable and pulleys, Fin.

LUDINGTON

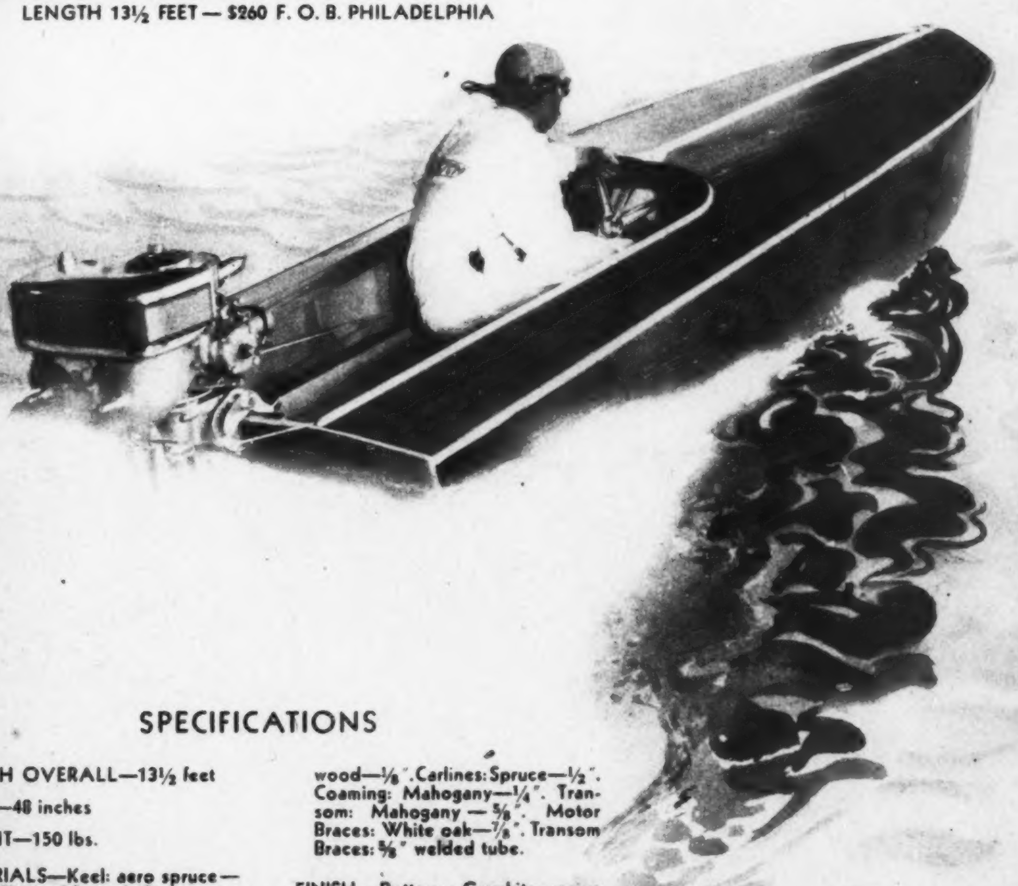
Bird's E
of Ligh
showi
racing

The *New* LUDINGTON
Speed Model for B & C Motors
ROCKET
THE SPEEDSTER OF THE WATERWAYS

DUNNELL DESIGNED
B & C CLASS, DIVISION 1, 2 D CLASS DIVISION 3

Someone cuts in--off to a bad start--that's when steady nerves and a steady boat are required. Close in--close in--now you're out in front! Good old Rocket! Get behind the wheel of a Rocket and pull away from the field. It's fast, trim, and seaworthy.

LENGTH 13½ FEET — $260 F. O. B. PHILADELPHIA



SPECIFICATIONS

LENGTH OVERALL—13½ feet

BEAM—48 inches

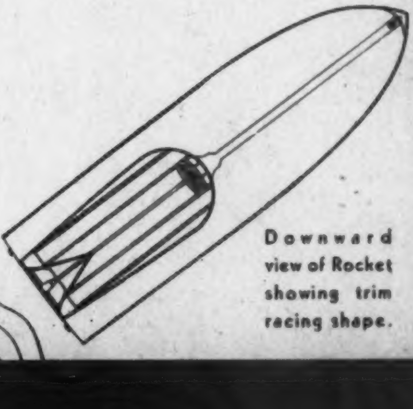
WEIGHT—150 lbs.

MATERIALS—Keel: aero spruce—1" x 2½" rabbetted, Stern: aero spruce—2" rebetted, Chines: aero spruce—1¼" x 1¼" rabbetted, Sheet Clamps: aero spruce—½" x 1½", Stringers: spruce—¾" x 3". Bottom Frames: spruce—⅝". Side Frames: spruce—½". Gussets: plywood—3/16". Bottom planking: waterproof plywood—3/16". Side planking: Mahogany waterproof plywood—3/16". Deck planking: Mahogany waterproof plywood—⅛". Carlines: Spruce—½". Coaming: Mahogany—¼". Transom: Mahogany—⅝". Motor Braces: White oak—⅞". Transom Braces: ⅝" welded tube.

FINISH—Bottom: Graphite racing compound. Sides: Mahogany bright finish. Deck: Mahogany bright finish. Transom: Mahogany bright finish. Inside: paint. Trim: bright finish.

FITTINGS—Combination bow plate and lifting handle, Lifting handles aft, Steering wheel, Throttle with Bowdoin wire, Steering cable and pulleys, Fin.

LUDINGTON



Downward view of Rocket showing trim racing shape.

The *New* LUDINGTON
Speed Model for D & E Motors

FLASH

THE SPEEDSTER OF THE WATERWAYS

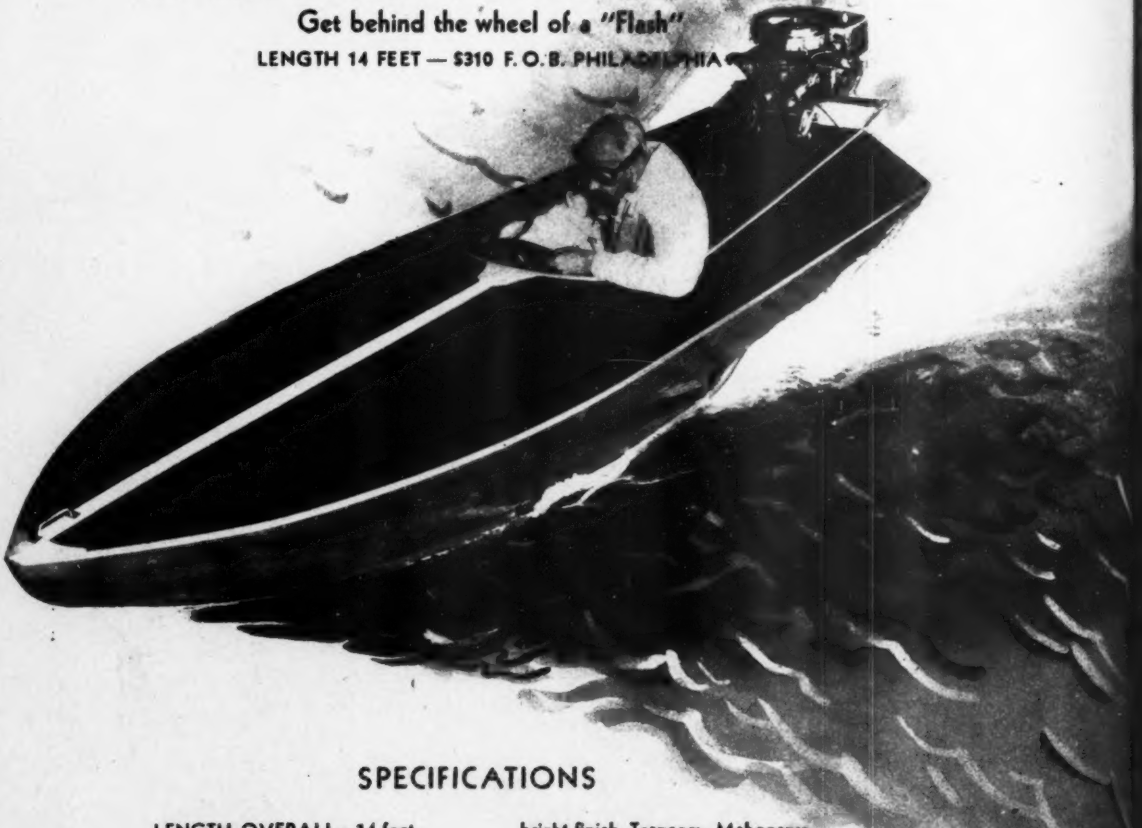
D & E CLASS DIVISION 1, 2 OR 3

DUNNELL DESIGNED

A big brother to the Model "A" Lightning, the Flash blazes the trail powered by the largest and most powerful motors. This is Jake Dunnell's favorite model - - a man's boat for a man's job. Laughs at rough water and its fastest competitors.

Get behind the wheel of a "Flash"

LENGTH 14 FEET — $310 F. O. B. PHILADELPHIA



SPECIFICATIONS

LENGTH OVERALL—14 feet

BEAM—52 inches

WEIGHT—190 lbs.

MATERIALS—Airplane Spruce and 3-ply Mahogany Veneer. Rabbetted joints.

FINISH—Bottom: Graphite racing compound. Sides: Mahogany bright finish. Deck: Mahogany bright finish. Transom: Mahogany bright finish. Inside: paint. Trim: bright finish.

FITTINGS—Combination bow plate and lifting handle, Lifting handles aft, Steering wheel, Throttle with Bowdoin wire, Steering cable and pulleys, Fin.

LUDINGTON

THE NEWEST SEA HORSES

Two New Models Feature 1930 Line of Johnson Engines With Alternate Firing in Two Cylinders

NEW improvements—some of which are even more revolutionary and startling than those which characterize its 1929 line of Sea Horses—plus the addition of two new motors, the Sea Horse 4 and the Sea Horse 12, have been announced by the Johnson Motor Company, Waukegan, Illinois in their 1930 line of outboard motors, the Sea Horses.

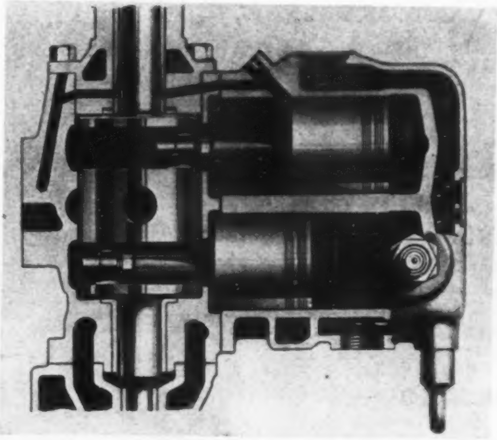
The most startling of the new improvements on the 1930 models is the development, for the first time in outboard history, of a successful twin-cylinder motor in which the cylinders fire alternately, one after the other, instead of simultaneously. Two impulses are produced per revolution instead of one as heretofore.

Smoothness of power flow is increased 100 per cent by this alternate firing system, which is incorporated in both the new Sea Horse 4 and 12. These new type motors throttle down to a noiseless steady crawl, unbroken by any noticeable pulsations, even in the steering handle. Not only in smooth flowing power but in ease of starting these new motors surpass all previous designs, which fire both cylinders at the same time.

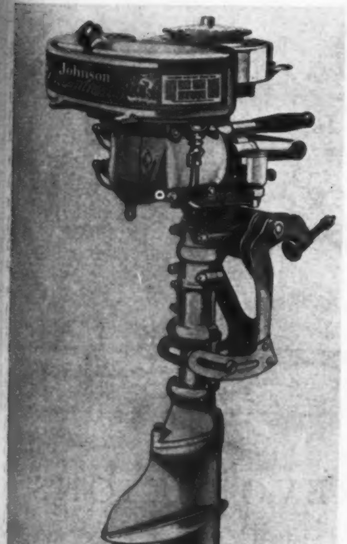
Another improvement which will be welcomed by outboard enthusiasts all over the world is the return of full pivot steering with underwater exhaust. In 1929 when the underwater exhaust was first introduced, the extra exhaust pipe prohibited the full pivot steering mechanism. Now Johnson has enclosed its underwater exhaust pipe in the single driveshaft casing and outboard motorists using either the Sea Horse 4 or 12 may now have the benefits of full pivot steering plus the pleasure and comfort of a motor in which noises and fumes are eliminated by a water cooled underwater exhaust.

In addition to this, Johnson has also designed an automatic back pressure relief valve which opens and closes the cutout valve to relieve back pressure from the underwater exhaust. In the 4 and 12 this automatic valve, located on the side of the driveshaft casing, is operated by the water pressure from the cooling system, and on the 16 and 32 by spark control. Both operate to permit the valve to close

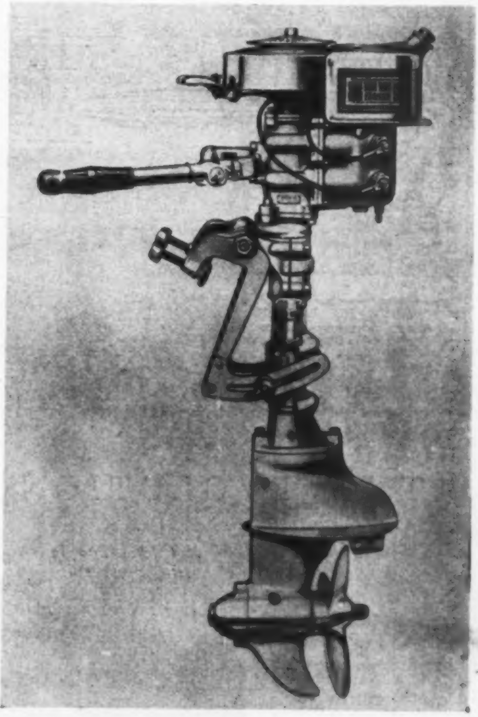
(*Continued on page* 456)



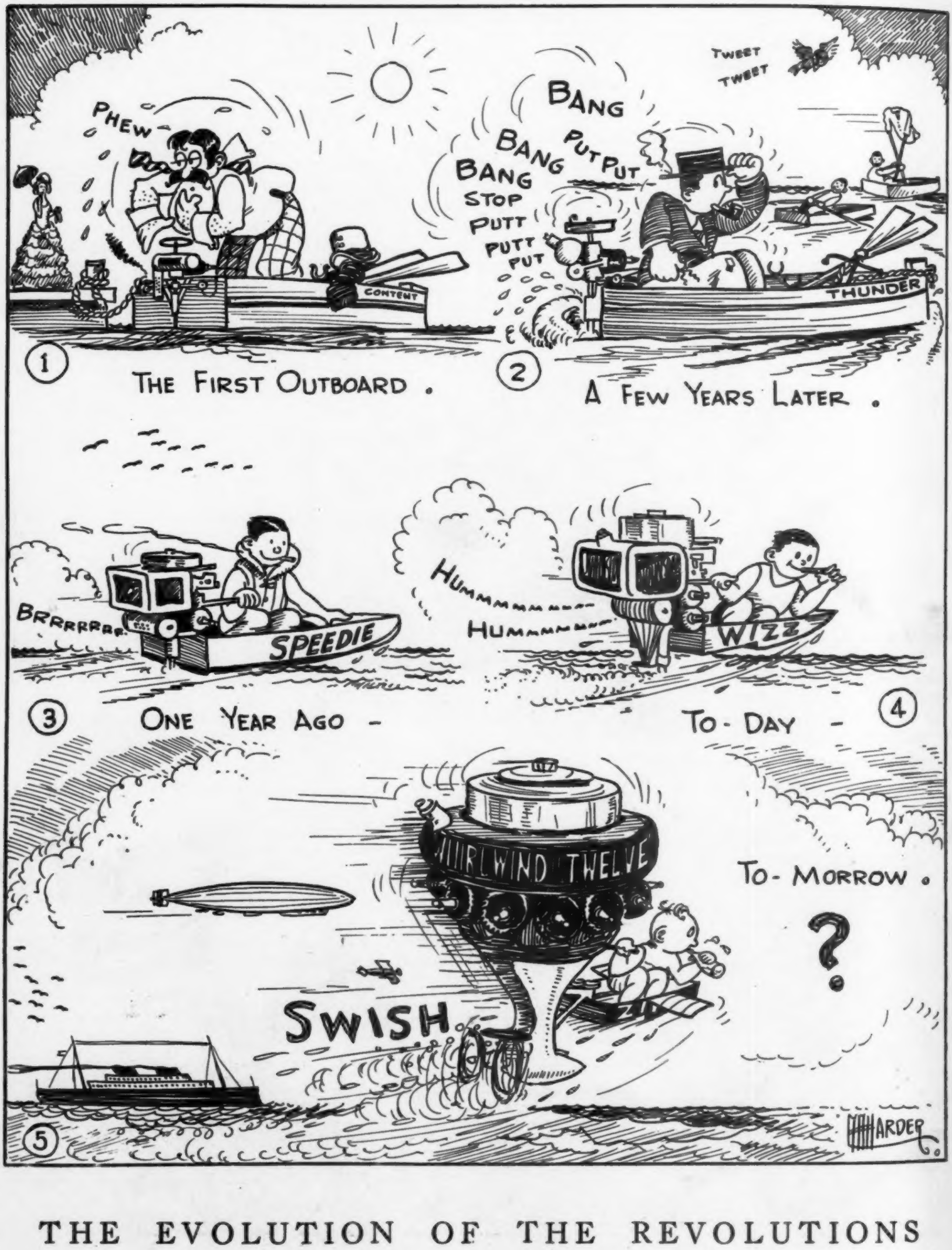
The vertical arrangement of cylinders in the Sea Horse 4 and 12 which permits alternate firing and yields a smoother power flow



The compact appearance of the Sea Horse 4 made possible by the arrangement of the cylinder block



A side view of the newest Johnson engines. These engines will again feature full pivot steering with the underwater exhaust


PHEW
CONTENT
① THE FIRST OUTBOARD.
BANG
BANG
BANG
STOP
PUTT
PUTT
PUT
PUTPUT
TWEET
TWEET
THUNDER
② A FEW YEARS LATER.
BRRRRRRR
SPEEDIE
③ ONE YEAR AGO -
HUMMMMMM
HUMMMMM
WIZZ
TO-DAY - ④
WHIRLWIND TWELVE
TO-MORROW.
?
SWISH
⑤
HARDER

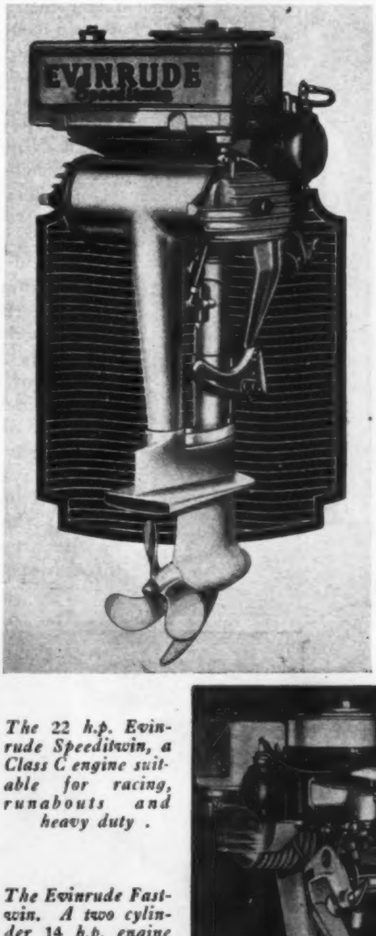
THE EVOLUTION OF THE REVOLUTIONS

Not long ago in the days of the brown derby our boatmen were content if their outboard engine relieved them of the labor of rowing. Today our youngest children are not happy unless they are able to drive the largest and most powerful engines made.

ELECTRIC STARTING OUTBOARDS

New Model Evinrude Speeditwin To Be Supplied With Latest Improvement for Quick and More Certain Starting

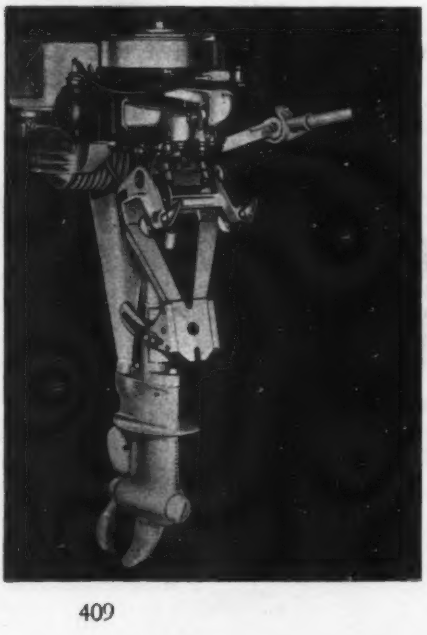
THE Evinrude Division, Outboard Motors Corporation, announce new 1930 models which achieve new standards of outboard motor perfection and mark the introduction of radical new developments, created through the engineering genius of Ole Evinrude, working with a staff representing the combined engineering skill and experience of the three Divisions of Outboard Motors Corporation.



The 22 h.p. Evinrude Speeditwin, a Class C engine suitable for racing, runabouts and heavy duty .

An announcement of tremendous importance in the outboard field concerns the electric starter now offered on Outboard Motors Corporation motors. In pioneering this startling new achievement, Outboard Motors Corporation engineers are answering the desire of nearly every lover of the outdoors for an outboard in which starting difficulties might be totally eliminated.

Speeditwin in addition to electric starting has been further perfected in a new lower unit, giving added power, still greater speed and even more silent performance. The new unit, through the attainment of finer streamlining, gives added speed due to decreased water resistance. An underwater silencer entirely eliminating back pressure, thereby insuring full use of power at the propeller wheel, and non-interference with instantaneous starting, is a feature which will be welcomed by every outboard motor enthusiast. All of the features which contributed to Speeditwin's remarkable popularity and performance during 1929—suction-cooling, full ball- and roller bearing construction, automatic tilt-up and the Evinrude waterproof, high tension magneto of the new design which was introduced in 1929, have been retained in the 1930 model. In spite of the addition of the new features, Speeditwin's weight is not increased.



The Evinrude Fastwin. A two cylinder 14 h.p. engine for family boat and auxiliary service

For the runabout or the family boat, the 1930 Fastwin is an ideal choice. All of the features which made this motor the popular choice during 1929 are retained in the 1930 model. Hundreds of enthusiastic owners have appreciated its full ball and roller bearing construction, suction cooling system and waterproof ignition. Anyone inspecting Fastwin will find of particular interest its automatic tilt-up, which serves as a protection to the motor against underwater obstructions, its underwater silencer that discharges objectionable exhaust gases silently under water, and its straight-ahead and self-steering features, relieving the operator from the necessity of steering and giving freedom for the hands to do other things.

The lover of the outdoors, the camper, the hunter, the fisherman, will find the 1930 Fleetwin ideally adapted to his uses. Weighing but 58 pounds, this motor is built for sturdy dependability and gives smooth, quiet water transportation on the smaller types of boats. Waterproof ignition, suction cooling, automatic tilt-up and ball and roller bearing construction are among Fleetwin's many features, contributing toward leadership in its class.

Ole Evinrude, inventor of the outboard, makes the most noteworthy contribution of the year 1930 in the remarkable new Outboard Motors Corporation Fold-Light.

Fold-Light is the lightest twin cylinder outboard motor ever conceived by outboard engineers. Weighing but 29 pounds, it immediately becomes the world's lightest twin cylinder motor. Fold-Light is also the most compact motor ever designed. By using twin cylinders, the hinging device placed in the drive shaft housing, midway between the tip of the propeller skeg and the top of the flywheel permits the motor to be folded up to compact dimensions.

Aside from its startling light weight and compact size, Fold-Light embodies numerous other radically new features. The automobile owner knows that the mounting of the engine block upon cushions of rubber has achieved

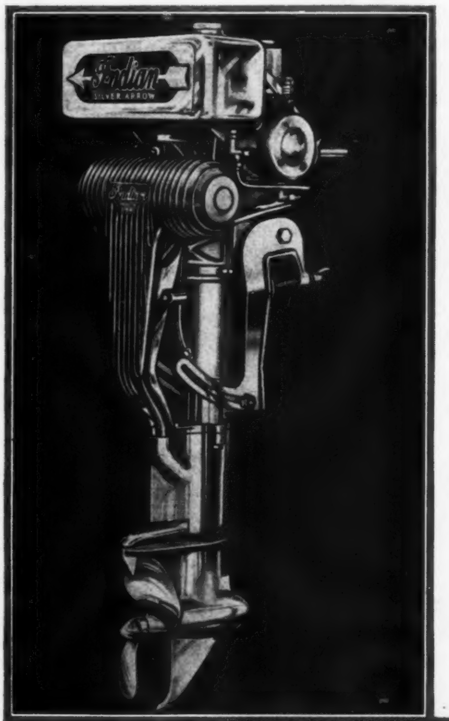
(*Continued on page* 458)

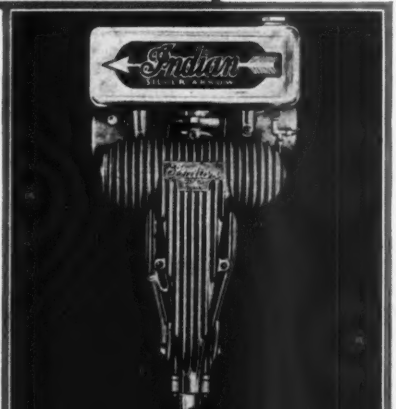
THE NEWEST OUTBOARD APPEARS

New Engine Built by Manufacturers of the Indian Motorcycle

Has Been Designed for Maximum Performance and Long Life

SINCE the announcement was first made that the Indian Motocycle Company was to place upon the market an Outboard Motor, much speculation has been in the air regarding the mechanical specifications of the new motor. The firm has a background of 27 years experience in design and building small motors—and those who have been familiar with the type of Indian Motocycle used throughout the world in police departments and by sporting enthusiasts, have been loud in their contention that Indian Motocycle Company would produce an Outboard Motor with several radical departures from the conventional outboard design. Others have claimed that the conservative yet progressive policies of this manufacturer of motorcycles would make the new Indian Outboard Motor of more or less conservative design.





The new Indian Silver Arrow, outboard engine is a Class B machine with many exclusive features

A rear view showing the one piece aluminum muffler and the carefully streamlined lower housing

However, now that the new Indian Silver Arrow has been announced, Indian officials have made public the mechanical details of the new Silver Arrow Motor. First, the motor is of the Class B type and is a two stroke, three port design. The cubic inch piston displacement amounts to exactly 19.36 cu. in. with a bore of 2½ and a stroke of 2 inches. Upon an examination of the general layout and design of the Indian Silver Arrow, one is instantly impressed with the fact that the new motor is a thoroughly engineered job from start to finish, with stamina and reliability predominant in the design. In fact, those who are familiar with motorcycle design, can readily note the handwork of Indian's staff of trained engineers when it is remembered that the Indian Scout Motocycle, first designed and produced nine years ago, now ranks as the world's leading motorcycle from the standpoint of stamina and long life. The selfsame engineers who developed the Indian Scout have aided in the design of the new Indian Silver Arrow Outboard Motor, and Indian officials are loud in their acclaim that in the new Silver Arrow there will be a motor which will be able to outrun competitive makes and keep its tune very much longer than usual, in the hands of the average boat owner. Great strength and carefully engineered design are evident in the one-piece crankcase construction of specially heat treated aluminum alloy, the new and entirely radical cylinder construction, and the very efficient and businesslike appearing muffler which is composed of a single casting of silicon aluminum alloy.

The new Indian Silver Arrow Outboard Motor is of a high speed type, with a normal speed of 4,600 r.p.m. The lower housing, containing the drive gears, also contains the important elements of the cooling system, and is designed in such a manner as to offer minimum drag in the water.

The new motor is cooled by the pressure system, whereby water for cooling is induced through a screen in back of the propeller, and is forced by the pressure of the propeller up through special passages in the lower housing direct to the cylinder jacket. From the cylinder jacket it is discharged into the open air, within vision of the operator of the motor. Such a design is just one more step toward a fool-proof outboard motor, for even the most inexperienced, of operators can readily note just how the cooling system of the motor is functioning at any time.

With 27 years experience in building small gasoline engines to develop the utmost horsepower in the smallest possible space, it is not surprising to note a special high

(*Continued on p.* 412)

From the Spanish Galleon to the Modern Motor Craft Philippine Mahogany has been Standard for

Good Boat Construction

PHILIPPINE MAHOGANY

Supplied by BLACK & YATES

Used by the Leading Manufacturers of High Grade

OUTBOARD MOTOR BOATS, RUNABOUTS and CRUISERS

for the following reasons:

1. BEAUTY—Quarter-sawn Philippine Mahogany is beautifully figured, making it most desirable for transoms and joiner work on all types of fine craft.

2. STRONG AND DURABLE—It can be resawn to ¼" or 3/16" planking and still retain remarkable strength and durability.

3. VERY LIGHT WEIGHT—The light weight of Philippine Mahogany saves power and increases speed. Its durability and strength conserve material by allowing the use of thinner planking without sacrificing strength or safety.

4. EASY TO WORK—Black & Yates Philippine Mahogany is of a soft even texture and has excellent bending qualities.

5. MOST ECONOMICAL—For many reasons Philippine Mahogany is most economical. Its cost is considerably less than other mahoganies because it is imported DUTY FREE from the Philippine Islands, a United States possession. This saving is passed on to the consumer. Philippine Mahogany is equally suitable for joiner work as well as for planking. Off cuts from Philippine Mahogany planking (usually a total loss where other lumber is used) can be utilized with Philippine Mahogany for joiner work in other parts of the boat.

6. COMES IN GOOD WIDTHS AND LENGTHS which are so essential for planking, transoms and cabin sides. By using Philippine Mahogany for both planking and joiner work the boat builder can buy in larger quantities at lower prices by ordering in carload lots.

7. FREE FROM PIN WORM-HOLE DEFECTS which so often mar the finish of an otherwise perfect boat. For thin outboard planking it is absolutely essential to have all clear stock. We guarantee our Philippine Mahogany to be free from pin worm-holes.

Black & Yates Philippine Mahogany is imported direct from the Philippine Islands to our Brooklyn, N. Y. yard, where a stock of two million feet of clear, thoroughly air-dried and seasoned lumber is carried at all times for immediate shipment.

Let us quote on your requirements for 1930

BLACK & YATES, Inc.

1501 Broadway　Paramount Building　New York, N. Y.

Telephone: Longacre 1345-6-7

SPECIFICATIONS OF AMERICAN OUTBOARD ENGINES

MODEL	Class A, B, C, D	Horse Power	Piston Displacement	Bore and Stroke	Number of Cylinders	R. P. M.	Weight	*Lubrication Method	*Make Ignition	*Make Spark Plugs	*Make Carburetor
CAILLE **Detroit, Mich.**											
Red Head 14	A	6	13.916	2¼ x 1¾	2	....	40	Fu	Bo	....	Til
Red Head 15	A	6	13.916	2¼ x 1¾	2	....	43	Fu	Bo	....	Til
Red Head 25	B	15	19.63	2½ x 2	2	....	75	Fu	Bo	....	Til
Red Head 45	C	21	29.6	2¾ x 2½	2	....	105	Fu	Bo	....	Til
Red Head (Racer) 35	A	10	13.916	2¼ x 1¾	2	....	43	Fu	Bo	....	Til
Red Head (Racer) 40	B	17	19.63	2½ x 2	2	....	75	Fu	Bo	....	Til
Red Head (Racer) 50	C	23	29.6	2¾ x 2½	2	....	105	Fu	Bo	....	Til
CROSS RADIAL **Detroit, Mich.**											
***563-S**	G	50	74	2½ x 3	5	4000	155	Pr	Rob Bo	A C	Til
***563-R**	G	50	74	2½ x 3	5	4500	....	Pr	Rob Bo	A C & Bo	Winfield
***563-C**	G	50	74	2½ x 3	5	4000	155	Pr	Rob Bo	A C	Til
ELTO **Otuboard Motors Corp.** **Milwaukee, Wis.**											
Fold Light	A	2¾	8.2	1¾ x 1⅝	2	3500	29	Fu	Fl	A C or Ch	Til
Lightweight	A	3½	10.2	2 x 1⅝	2	3500	38	Fu	AK	A C or Ch	Elto
Service Speedster	B	7	19.6	2½ x 2	2	3500	64	Fu	AK	A C or Ch	Elto
HiSpeed Speedster	B	12	19.6	2½ x 2	2	4500	62	Fu	AK	A C or Ch	Elto
Senior Speedster	C	14	24.5	2½ x 2½	2	4000	80	Fu	AK	A C or Ch	Elto
Senior Speedster (Starter)	C	14	24.5	2½ x 2½	2	4000	94	Fu	Storage Bat.	A C or Ch	Elto
Quad	E	35	49	2½ x 2½	4	4500	115	Fu	AK	A C or Ch	Elto
Quad (Starter)	E	35	49	2½ x 2½	4	4500	129	Fu	Storage Bat.	A C or Ch	Elto
EVINRUDE **Milwaukee, Wis.** **Outborad Motors Corp.**											
Fold-Light	A	2¾	8.2	1¾ x 1⅝	2	3500	29	Fu	Fl	A C	Til
Fleetwin	A	6	13.9	2 1/16 x 2	2	4000	58	Fu	Fl	A C	Til
Fastwin	B	14	19.9	2⅜ x 2¼	2	4500	82	Fu	Fl	A C	Til
Speeditwin	C	20	29.9	2¾ x 2½	2	4500	97	Fu	Fl	A C	Til
Speeditwin 22	C	22	29.9	2¾ x 2½	2	4500	98	Fu	Storage Bat	A C	Til
Speeditwin 22 (Starter)	C	22	29.9	2¾ x 2½	2	4500	112	Fu	Storage Bat.	A C	Til
INDIAN **Springfield, Mass.**											
601	B	....	19.63	2½ x 2	2	....	67	Fu	Bo-Fl	Ch	Til
JOHNSON SEA HORSE **Waukegan, Ill.**											
Single	A	1½	4.71	2 x 1½	1	2800	27	Fu	Fl Mag	....	Own
3	A	3	9.42	2 x 1½	2	3000	38	Fu	Fl Mag	....	Own
4	A	4	8.28	1⅞ x 1½	2	4500	45	Fu	Fl Mag	....	Own
10	B	10	19.9	2⅜ x 2¼	2	3800	63	Fu	Fl Mag	....	Own
12	A	12	13.96	2⅛ x 1 11/16	2	4500	60	Fu	Fl Mag	....	Own
16	B	16	19.9	2⅜ x 2¼	2	4500	89	Fu	Fl Mag	....	Own
32	D	32	39.8	2⅜ x 2¼	4	4500	110	Fu	Fl Mag	....	Own
LOCKWOOD **Outdoor Motors Corp.** **Milwaukee, Wis.**											
Fold-Light	A	2¾	8.2	1¾ x 1⅝	2	3500	29	Fu	Fl	A C	Til
Ace	A	7	13.9	2.1 x 2	2	4000	50	Fu	Fl	A C	Til
Chief	B	12	19.9	2⅜ x 2¼	2	4500	70	Fu	Fl	A C	Til
Chief (Starter)	B	12	19.9	2⅜ x 2¼	2	4500	84	Fu	Fl	A C	Til
MUNCIE TWIN **Muncie, Ind.**											
OB2	A	2½-3	9.42	2 x 1½	2	3250	42	Fu	Bo	A C	Til

***KEY TO SYMBOLS**

*—4 Cycle	Ei—Eiseman	Sc—Scintilla
Bo—Bosch	Fl—Flywheel	Til—Tillotson
Ch—Champion	Pr—Pressure	Zen—Zenith
	Fu—In Fuel	AK—Atwater Kent

All of the larger sizes of engines will be supplied with electric starters in 1930

THE NEWEST OUTBOARD APPEARS

(*Continued from page* 410)

efficiency feature in the design of the cylinders. This new design incorporates a cylinder packet of high grade aluminum alloy, with a high grade cast iron cylinder barrel inserted. In other words, the cylinder itself is a barrel of iron surrounded by an aluminum water jacket—with an entirely aluminum head of the Hot-Head variety. Indian has perfected this design and has eliminated the water jacketing of the head for the express purpose of furnishing a motor which will operate at exactly the correct temperature for highest efficiency at all times.

In the design of the new muffler, the engineering staff has exhibited its knowledge of problems in silencing small high speed gasoline engines. A very handsome muffler, consisting of a single aluminum alloy casting, very carefully shaped and fitted with ample radiating fins, carries exhaust direct from the cylinders to the lower housing, whereupon it enters the water. Tests in the water during the last few months have convinced all spectators that the new Indian muffler offers the very utmost in silence and smooth operation with the very minimum of back-pressure.

The trade is looking forward to more outboard motor announcements by this famous manufacturer of motorcycles. However, Indian officials are not divulging details of their plans for 1930 beyond the announcement of the Silver Arrow. There is every indication that the Outboard Motor Industry is to be benefited every way by this latest entrant to the field.

DEPENDABLE POWER

Oversized, sturdy construction and smooth, dependable power are the outstanding characteristics of the Falcon line of marine motors produced by the United States Motors Corporation of Oshkosh, Wisconsin. The series comprises five husky models as well as a complete line of marine electric generating sets which range in capacity from 350 watts to 25 kilowatts.

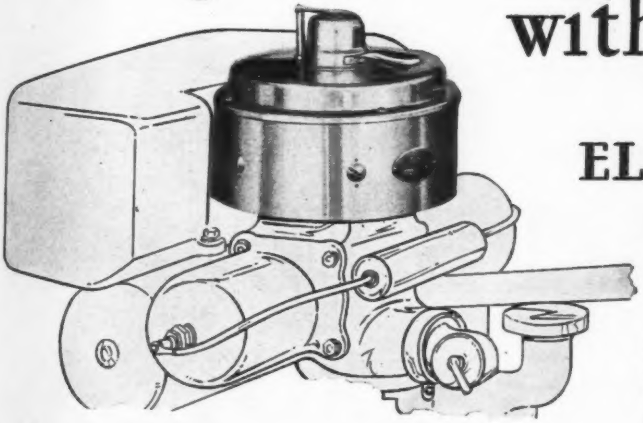
Falcon motors are built in 1 cylinder 5 h.p., 2 cylinder 10 h.p., 4 cylinder 15 h.p., 4 cylinder 40 h.p. and 6 cylinder 50 h.p. types, each of which is distinguished in its class by its inherent qualities of ruggedness and long life. Models 5 and 10 are practically identical in design except in number of cylinders, and have been prepared especially to meet the requirements of the fishing trade and similar heavy duty.

The 10-15 h.p. Falcon is a compact little 4 cylinder unit that crowds a maximum of power into a limited amount of space. Flexible in the extreme, it is ideally suited to use in runabouts, tenders, small cruisers and for auxiliary power.

The 40 is a most advanced type of motor of matchless performance in any field. Vibrationless power output, oversize construction, quick acceleration, easy starting and control and complete accessibility are in-built qualities that recommend it to any service.

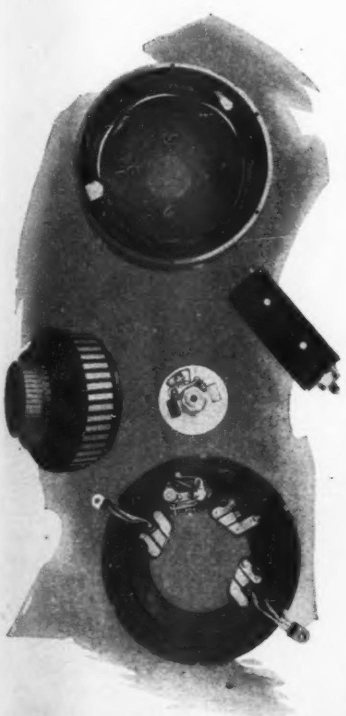
The big 60 h.p. Falcon is a six-cylindered job and embodies all of the modern refinements found in the smaller engines, producing a power plant of exceptional quality for cruiser, runabout and work boat use.

Now.. SELF-STARTING for Outboard Motors! with Dyneto



ELECTRIC STARTER GENERATOR (Single Unit)

Above is illustrated a Dyneto Electric Starter Generator as it appears when installed on an outboard motor. Note its trim, compact appearance. No exposed moving parts.



At the left are illustrated the five units of the Dyneto Electric Starter Generator. From top to bottom they are: Field Assembly Frame, Coil, Breaker Mechanism, Armature, and Brush Ring.

Start your new outboard motor with the press of a switch!

Now Dyneto opens the gateway to outboard boating pleasure for everyone—even women and children—with the exclusive development of the Dyneto Electric Starter Generator (Single Unit), that starts an outboard motor with the press of a button! Positive starting!

The public demand for increased horse power in outboard engines has made hand starting more and more difficult—in the past outboard motoring has been mainly confined to the more rigorous boating enthusiasts.

Just as the world's finest motor cars are equipped with Dyneto starting systems, practically all leading outboard motor manufacturers offer Dyneto Starter Generator equipped outboard motors. The same sound engineering principles that were pioneered by Dyneto designers for the automotive industry are now applied to outboard starters—giving outboard motors the same safe, sure method of starting enjoyed in modern automobiles.

Dyneto is pleased to pass on to the boating industry the benefit of its age-old experience in designing and developing electrical systems for automobiles. It is proud to do its part in making boating—that most pleasant of all outdoor sports—even more pleasurable.

See the new Dyneto Electric Starter Generator equipped outboard motors at the Boat Show in New York, January 17th to 25th.

Write at Once for Descriptive Literature

OWEN-DYNETO CORPORATION
1924 PARK STREET - - - SYRACUSE, NEW YORK

SPECIFICATIONS OF OUTBOARD BOATS

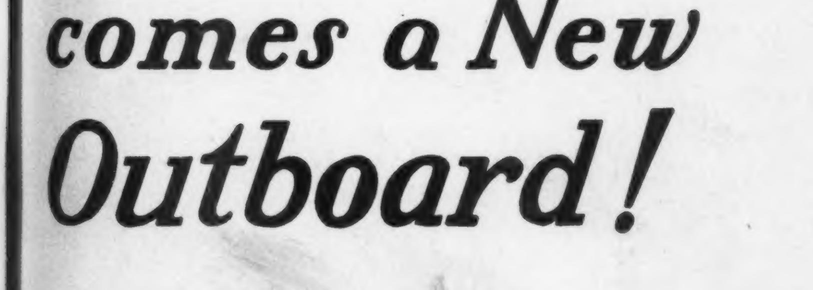
Name or Number of Model	Type of Bottom, Vee, Round or Step	Price	Length Feet	Beam Feet	Weight	Material and Size of Frames	Material Planking	Persons Carried	SPEED CLAIMED WITH MOTOR Class A	Class B	Class C	Class D	*Equipment
ACO SEABOAT **New York, N. Y.**													
Sea Nymph	Round	785	15-11	5-2½	480	Oak ⅝ x ⅝	Mahogany	5	......	......	23	28	CEFHLPWX
ASHBRIDGE **Wilmington, Calif.**													
Light Racer A	Semi Stepless	179	9-9	3-8	72	Spruce	Veneer	......	......	......	......	......	A
Light Racer B	Semi Stepless	179	11-9	4-0	79	Spruce	Veneer	2	30	42	42	42	A
Light Racer C	Semi Stepless	179	11-9	4-0	79	Spruce	Veneer	2	......	41	43	45	A
Light Racer D	Semi Stepless	179	11-9	4-3	98	Spruce	Veneer	2	......	36	42	47	A
Heavy Racer A	Semi Stepless	179	9-9	3-8	100	Spruce	Veneer	1	29	42	......	......	A
Heavy Racer B	Semi Stepless	198	11-9	3-11	150	Spruce	Veneer or Mahog.	2	......	40	41	......	A
Heavy Racer C	Semi Stepless	198	11-9	3-11	150	Spruce	Veneer or Mahog.	......	......	......	......	......	A
Heavy Racer D	Semi Stepless	198	11-9	4-3	190	Spruce	Veneer or Mahog.	3	......	......	......	45	A
Combination Skiff	Round Flat	98	14	4-0	195	Spruce	½ Spruce & ½ Fir	5	20	30	34	38	A
Runabout	Vee	275	14-0	4-11	275	Spruce	½ Mahog. or Cedar	6	16	26	30	34	A
Runabout DeLuxe	Vee	495	16-0	4-8	375	Spruce	½ Mahogany	6	......	24	28	32	ACX
Runabout DeLuxe	Vee	555	18-0	4-11	475	Spruce	......	8	......	......	25	29	ACX
BECKHARD **Flushing, N. Y.**													
Thisbe	Step	......	12-6	......	......	......	Mahogany	1	......	......	......	......	
Daytona	Biplane	......	14-0	4-8	190	......	Mahogany	4	......	......	......	......	CFLX
St. Pete	Biplane	......	16-0	5-0	350	......	Mahogany	4	......	......	......	......	CFLX
Floatboat	Punt	......	8-0	4-0	50	......	Mahogany	2	15	30	45	......	
B. & E. FLYER **Glen Cove, L. I., N. Y.**													
Miss Glen Cove	Step	......	13-0	4-2	150	½ Spruce	Mahogany	1	......	43	45	......	X
BOBILIN **Fort Plain, N. Y.**													
C Skipper	Round	190	16-0	4-6	225	½ x ⅞ Oak	Cedar	7	......	18	24	30	CLX
Skipper	Round	175	16-0	4-4	200	½ x ⅞ Oak	Cedar	6	......	20	25	......	CLX
Fisherman's Pal No. 1	Flat	40	12-0	3-2	150	Spruce	Cedar	3	10	......	......	......	
Fisherman's Pal No. 2	Flat	45	14-0	3-6	175	Spruce	Cedar	4	8	15	......	......	
Fisherman's Pal No. 3	Flat	50	16-0	3-9	200	Spruce	Cedar	5	7	14	18	......	
BOYD-MARTIN **Delphi, Ind.**													
Bullet Junior	Step	250	12-0	5-0	150	⅝ x 2 Mahogany	Mahogany	1	......	43	45	......	XC
Bullet Senior	Step	275	12-0	5-0	195	⅝ x 2 Mahogany	Mahogany	1	......	......	......	50	XC
Kingfisher Junior	Round	225	14-0	4-4	230	1¼ x ⅝ Oak	Cypress	6	11	18	20	......	O
Kingfisher Senior	Round	250	16-0	5-0	225	1¼ x ⅝ Oak	Cypress	8	9	15	18	20	O
Barbara	Round	275	18-0	5-4	275	1¼ x ⅝ Oak	Cypress	8	9	15	18	25	O
Mercury	Vee	375	16-0	5-0	365	⅞ x 2 Mahogany	Mahogany	8	......	20	25	30	
Commodore	Vee	565	16-0	5-0	475	⅞ x 2 Mahogany	Mahogany	6	......	20	25	30	XLCFP
BUCKHOUT **Poughkeepsie, N. Y.**													
18 Runabout	Vee	......	18-0	5-0	550	⅞x2¼ Mahogany	Mahogany	6	......	......	......	......	CEFHJLPWX
18 Sedan	Vee	......	18-0	5-0	670	⅞x2¼ Mahogany	Mahoagny	6	......	......	......	......	CEFGJLPWX
BRADY **Charlevoix, Mich.**													
Vamp	Step	190	10-9	4-0	115	½ Spruce	Mahogany	1	26	......	......	......	A
Sea Bird	Step	300	10-9	6-0	165	½ Spruce	Mahogany	1	27	45	......	......	AB
CRANDALL CRAFT **Newport Beach, Cal.**													
Comet	Step	265	10-10	4-0	150	⅝ Spruce	⅜ Mahogany	2	......	42	......	......	AB
Comet D & E	Step	......	12-0	4-5	200	⅝ x 3 Spruce	⅜ Mahogany	2	......	......	......	......	ABCD
Crandall Craft 15	Vee Round	......	15-0	4-3	......	½ x 1¼ Oak	⅞ Cedar	6	15	22	......	......	A
Double Cockpit 15½	Vee	585	15-10	4-9	500	¾ x 3 Spruce	⅜ & ⅞ Mahogany	5	......	18	24	27	ABCDL
Single Cockpit 15½	Vee	485	15-10	4-9	475	¾ x 3 Spruce	¾ & ⅞ Mahogany	8	......	18	24	27	L
Double Cockpit 19	Vee	985	19-7	5-2	700	⅞ x 3½ Spruce	⅜ & ½ Mahogany	5	......	......	......	24	ABCDELP
Sedan 19	Vee	995	19-7	5-2	750	⅞ x 3½ Spruce	⅜ & ½ Mahogany	6	......	......	......	24	ABDELP
CROUCH **Middletown, Conn.**													
Harpoon	Round	345	16-0	4-6	225	Oak	Cedar	6	......	24	30	38	
Sportsman	Round	250	16-0	4-6	175	Oak	Cedar	6	......	26	33	40	
Split 2nd	Step	250	11-0	4-0	100	Spruce	Mahogany	1	......	......	......	......	
CUTE CRAFT **Fall River, Mass.**													
Bi-Plane	Concave	140	8-6	3-10½	110	¾ Spruce	Mahogany	2	26	42	40	......	AB
Meteor	Step	275	11-4	4-0	140	¾ Spruce	Mahogany	2	42	40	46	......	ABCFL
Sea Horse	Step	425	14-9	4-0	265	¾ Ash	Mahogany	4	......	20	37	42	
DARROW **Albion, Mich.**													
De Luxe Launch 160	Flat	150	16-0	4-2	295	......	Steel	8	......	......	......	......	
De Luxe Launch 140	Flat	130	14-0	3-10	200	......	Steel	6	......	......	......	......	
Darrow Plane 800	......	90	10-0	......	75	Cypress & Oak	Steel	......	......	......	......	......	
DEBASCO **Philadelphia, Pa.**													
Champion	Step	250	12-0	4-3	150	1 Spruce	Mahogany	......	......	......	40	45	
Junior	Step	225	10-0	3-11	130	1 Spruce	Mahogany	......	......	40	40	......	
DEE WITE **Detroit, Mich.**													
1-D	Vee	535	16-0	4-6	575	Oak	Mahogany	6	......	......	20	25	ABCDFLPX
DOANE **Stamford, Conn.**													
42	Step	185	8-4	4-0	100	½ Mahogany	Mahogany	1	30	42	......	......	A
52	Step	245	11-3	4-6	150	½ Mahogany	Mahogany	1	......	40	44	52	A
Marathon	Step	325	13-0	4-10	190	¾ Mahogany	Mahogany	3	......	35	40	45	A
Hydroboat	Step	365	13-3	4-8	250	¾ Mahogany	Mahogany	6	......	30	35	40	A

*** Key to Equipment Symbols**

A—Steering Wheel; B—Remote Control; C—Cushions; D—Windshield; E—Fire Extinguisher; F—Flag Staff; H—Boat Hook; J—Life Jackets; O—Oars; L—Running Lights; P—Pump; W—Whistle; X—Paddle

(*Continued on page* 420)

FROM THE WIGWAM
of MANY INDIAN
MOTORS....
comes a New
Outboard!



Home of the World Famous *Indian*

Backed by 27 Years of successful Motor Manufacturing

FOR twenty-seven years, INDIAN Motocycles have been the accepted standard for speed, power and endurance. INDIAN Motocycles have been the exclusive equipment of the country's largest police forces—New York's Police Department uses INDIANS exclusively and hundreds of other police departments everywhere know and appreciate INDIAN performance. The steady day-and-night, rain-or-shine dependability of the INDIAN Motocycle has never been equalled.

Now, born of the experience of 27 years making INDIAN Motocycles, INDIAN offers an Outboard Motor, embodying the same qualities of speed, endurance, dependability.

The new INDIAN Silver Arrow Outboard Motor delivers the same smooth, steady flow of power of its motorcycle brother; it is built to stand the same grueling punishment, to "get you there" under every condition; to give you speed when speed is needed; to deliver always an abundance of dogged, persistent power. The 27 years of skilled engineering experience devoted to the designing of small compact power units is yours, when you buy the INDIAN Silver Arrow Outboard.

Indian

SILVER ARROW

Here's the Silver Arrow

A Worthy Brother to the Motorcycle that holds the World's Speed Records—the World's Endurance Records—and other scalps earned in Competition where ***Superior Performance Wins!***

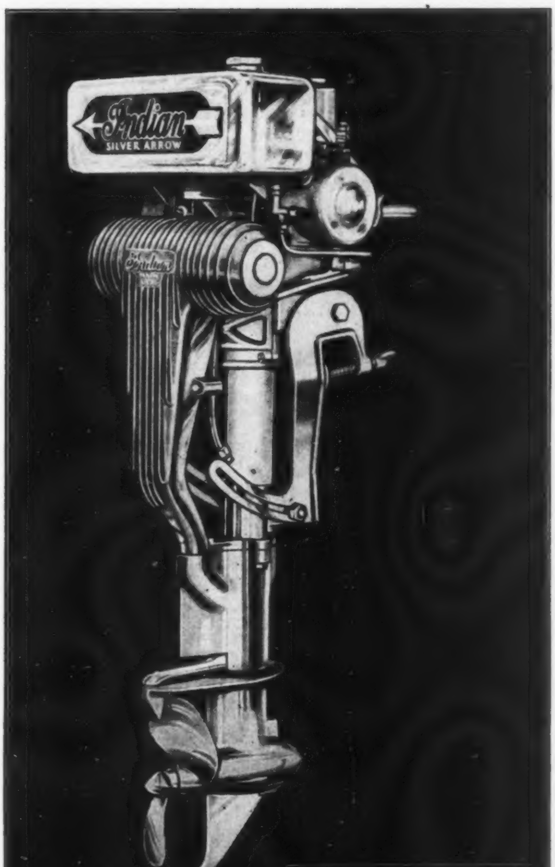
HERE it is—the INDIAN Silver Arrow Outboard Motor—with a host of exclusive INDIAN features that make for liability, long life, and ***punch!*** An ease of arting heretofore unknown in outboards—d real economy of operation—are further atures of this new INDIAN Motor. Note e strong, clean-cut design—and the absence small parts. An indication of typical DIAN stamina.

It's a Class B Motor of 19.36 cubic inches ston displacement — most efficient, two-oke, three port design. It's just loaded th horse-power—starts at a turn of the wheel and rev's up to 4500 R.P.M. with a oothness that's a treat to the outboard otor enthusiast. The new INDIAN cylinder sign, employing a solid aluminum alloy d—and the new "Full-View" cooling sys-n, helps this motor to deliver maximum rformance when you want it.

This new INDIAN motor is designed and ilt throughout to the INDIAN standard of ality and wherever possible, especially in ne of the larger parts, high grade aluminum oy is used, with the result that the motor ighs only 68 pounds.

Silence is the key-note of the Silver Arrow otor. The new INDIAN cast aluminum encer, made in *one piece* carries the exhaust der water with a minimum of back-pres-e. This silencer is another carefully gineered feature with its ample cooling s which help to dissipate heat effectually. arge oversize bearings, cylinders of best de cast-iron set in aluminum alloy water kets, and ball bearings wherever necessary, s a very thorough system of lubrication, tribute toward the long life in service ch one expects of INDIAN products.

ou must see—and try—this new INDIAN tor to appreciate outboard motoring at its t.



Above: Note the clean, compact, design of the Silver Arrow Motor, and the absence of small parts. Simplicity and stamina are built into this design. The spacious muffler, cast in one single piece of aluminum alloy, is well finned for cooling.

Indian
SILVER ARROW

At Right: A rear view of the INDIAN Silver Arrow Motor showing the carefully streamlined lower housing which slips through the water with minimum resistance. The design of the anti-cavitation plate is such that it facilitates exhaust by suction.

SMILE WITH the Indian

EVERYWHERE the red INDIAN Motocycle is a familiar sight . . . everyone remembers the INDIAN almost since motor vehicles have been known. Think what this prestige means behind the INDIAN Outboard! Outboard enthusiasts will recognize the advantages of a motor built on the knowledge acquired through 27 years of successful motorcycle engine manufacturing. Here, combined in one standardized motor, are all the features prospective purchasers seek — speed; smooth, steady power; absolutely dependable performance; strong, sturdy construction. Here, in one motor, are all the features generally found spread over several types; you stock one motor to meet 95% of the outboard user's needs. And behind it is the world-wide reputation of the great INDIAN Motocycle!

Choice Dealer territories still available—write today for full details.

INDIAN MOTOCYCLE COMPANY
SPRINGFIELD, MASS., U.S.A.

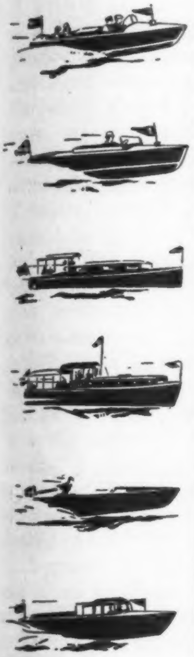
Cash in on Indian's World wide Prestige ....

AN MOTOCYCLE CO., SPRINGFIELD, MASS.
tlemen: Please send me complete details on the INDIAN
er Arrow dealer proposition. I am particularly inter
ted in the following territories:
....
ly name is ....
eet ....
y ....State..................

Only Champions

give you . . . Championship performance

CHAMPION
REG. U.S. PAT. OFF.



It is better performance that gives Champion today its remarkable preference throughout the world—in cruisers, speed boats, outboards and racing boats alike.

Gar and George Wood, Ralph Snoddy, Richard Hoyt, H. G. Ferguson, Malcolm Pope, F. E. Ludolph and the other world's champions in every competitive field of speed boating use Champions to insure better performance.

If this better performance counts in competition it counts in the every day use of your cruiser, speed boat, outboard or racer.

With Champions you get new results from your engine; the feel of renewed power and smoothness, greater economy and dependability. But you be the judge of these things yourself.

Just put a set of Champions in your boat today. Though Champions will outperform and outlast any other spark plugs, change them by the set every year for better performance and greater economy. They pay for themselves in gas and oil savings alone. We know from the experience of others that you will get better performance, but we prefer to have you learn it for yourself.

Champion 1929 boat records

New world's speed record, 93.123 miles per hour—Gar Wood, Miss America VII, March 26.

British International Trophy—Gar Wood, Miss America VIII, September 2.

Duke of York's International Gold Trophy, England—Ralph Snoddy, Miss Rioco III.

27th Annual Gold Cup Race, August 24, Red Bank, N. Y.—Richard Hoyt.

President's Cup—Richard Hoyt, September 14, Washington, D. C.

World's outboard speed record, 47.288 miles per hour, H. G. Ferguson, Blue Streak IV, Balboa, Calif., June 15.

World's outboard speed record, Class A, Douglas Haskins, Flatiron, Peoria, Ill., October 12-13.

World's outboard speed record, Class B, H. G. Ferguson, O Kay, Peoria, Ill., October 12-13.

World's outboard speed record, Class E, F. E. Ludolph, Wildcat, Peoria, Ill., October 12-13.

CHAMPION

SPARK PLUGS

TOLEDO, OHIO
WINDSOR, ONTARIO

SPECIFICATIONS OF OUTBOARD BOATS

(*Continued from page* 414)

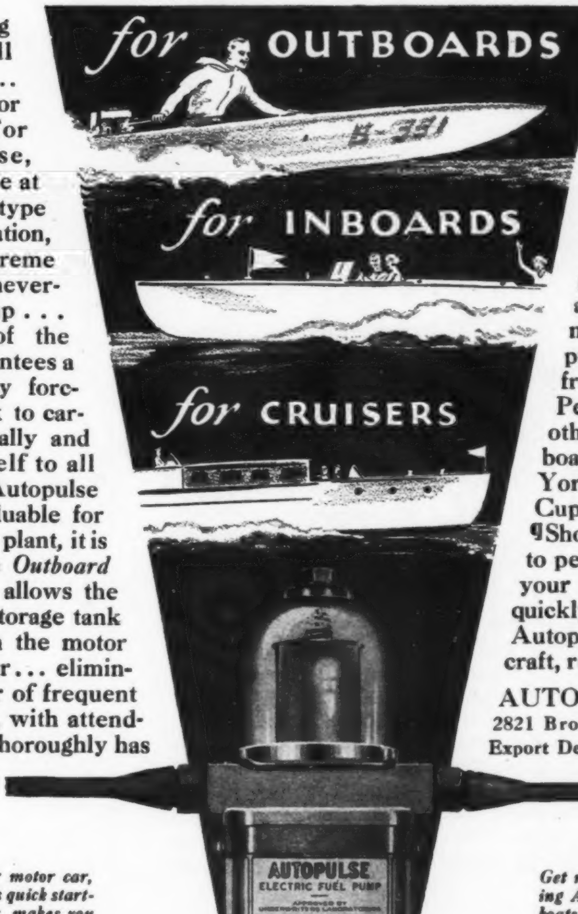
Name or Number of Model	Type of Bottom, Vee, Round or Step	Price	Length Feet	Beam Feet	Weight	Material and Size of Frames	Material Planking	Persons Carried	SPEED CLAIMED WITH MOTOR				*Equipment
									Class A	Class B	Class C	Class D	
HACKNEY													
Wilson, N. C.													
Cabin Cruiser	Vee	750	18-0	5-0	750	¾ Cedar	½ Cedar.	6				28	CEFHLPX
Trap Stern Runabout	Vee	400	18-0	4-6	400	¾ Cedar	½ Cedar	6				28	CEFHLPX
Open Stern Runabout	Vee	375	16-0	4-6	375	½ Oak	½ Cedar	5				30	CEFHLPX
Open Stern Runabout	Vee	350	14-0	4-6	350	½ Oak	½ Cedar	4				30	CEFHLPX
HAFER													
Spirit Lake, Iowa													
D-1	Step	225	12-1	4-0½	135	½ x 2 Mahogany	¼ Mahogany	3			42	40	X
C-2	Step	200	11 6	3-8½	120	½ x 1¾ Mahogany	¼ Cedar	2		38	44		X
B-3	Step	175	10 11	3-5½	110	½ x 1½ Mahogany	¼ Cedar	1	28	40			X
4	Concave-Convex	250	14-0	4-4	150	½ x 2½ Mahogany	⅝ Mahogany	5		30	35	40	X
HOOTON													
Holland, Mich.	Step	180	9-9	3-4	102	½ x 2½ Spruce	¼ Mahogany	1	33	42			
Wildcat Runabout	Step	220	11-6	3-10	150	¾ x 3½ Spruce	⅜ & ¼ Mahogany	3		40	47	52	
Wildcat Racer	Step	260	11-6	3-10	165	¾ x 3½ Spruce	⅜ & ¼ Mahogany	1		40	47	52	A
Safety-Plane Runabout	Step	280	13-6	4-0	220	¾ x 3½ Spruce	⅝ Mahogany	4		37	44	49	C
Safety-Plane Racer	Step	320	13-6	4-0	195	¾ x 3½ Spruce	¼ Mahogany	1		38	45	50	A
Vee-Plane Runabout	Vee	300	15-3	4-4	290	¾ x 3½ Spruce	⅜ Mahogany	5		24	30	36	ACDLF
Resorter	Round	265	15-0	4-8	280	⅝ x ⅞ Oak	⅞ Cedar	6	16	20	24	28	O
INDIAN BOAT CO.													
Lima, Ohio													
Flying Indian B	Step	225	12-0	4-0	150	⅝ x 2 Spruce	Mahogany	1		42	45		CX
Flying Indian C	Step	250	13-0	4-2	175	⅝ x 2 Spruce	Mahogany	1			45	47	CX
Indian Skimmer	Vee	175	12-0	3-8	130	⅝ x 2½ Spruce	Cedar	4	20	30			X
Indian Speedster	Vee	245	12-0	3-10	180	⅝ x 2½ Spruce	Mahogany	4	18	27			FLX
Indian Chief	Vee	285	15-6	4-0	220	¾ x 2½ Spruce	Mahogany	6		14	22	27	X
Indian Big Chief	Vee	345	16-0	4-2	265	¾ x 2½ Spruce	Mahogany	6		12	20	25	LFX
JOHNSON													
Waukegan, Ill.													
Aquaflyer 20	Round—Step	1065	20-0				Mahogany-Prestite					20	SeaHorse 32 ACL
Aquaflyer De Luxe		925-995	18-0	5-0			Sealite			19		25	SeaHorse 16 or 3
Service Runabout	Vee	485	18-0	5-0			Sealite			20		25	CU
Utility B	Vee	275	15-0				Sealite			22			
Utility A	Round	165	14-0				Sealite						
Family Boat	Round	135	15-0					8					
KARASZ													
Elmont, L. I., N. Y.													
Family	Vee	250	16-9	4-10½	300	¾ Oak	⅞ Cedar	6		12	18	25	
Runabout	Vee	350	11-9	4-10½	375	¾ Oak	⅞ Mahogany	5		12	18	25	CFL
Racing Hydro	Vee Step	275	12-6	4-6	225	½ Mahogany	⅝ Mahogany	2					CX
Racing Hydro	Vee Step	250	10-4	4-0	175	½ Mahogany	¼ Mahogany	2					CX
KEYSTONE													
Darby, Pa.													
Yacht Tender	Round	125	9-0	3-10	108	⅝ x ¾ Oak	Cedar	3					
Yacht Tender	Round	135	10-0	4-0	120	⅝ x ¾ Oak	Cedar	4					
Fishing Tender	Round	165	12-0	4-2	144	½ x ¾ Oak	Cedar	5					
General Purpose Tender	Round	175	14-0	4-2	160	½ x ¾ Oak	Cedar	6					
Runabout	Round	295	14-0	4-2	200	½ x ¾ Oak	Cedar	4					L
Kollegiate—Sea Skiff	Round	350	14-0	4-6	300	½ x ¾ Oak	Cedar	6					L
Sea Scout	Flat	65	12-0	3-10	140		Cedar	3					
KIDNEY													
West De Pere, Wis.													
Flash	Step	85	10-4	4-0		Oak & Spruce	Cedar..					40	
Family Runabout	Vee	192 up	16-0 17-0	4-0 4-6	200 up	Oak & Spruce	Cedar or Mahog.						O
Aristocrat	Vee	375	18-0	4-6		Oak & Spruce	Mahogany					35	C
Fox Step Racer	Step	160 up	12-9 14-0	3-10	130	Spruce	Cedar					37	
Badger Queen	Step	160 up	10-0	3-6	120	Spruce	Cedar or Mahog.						
LUDINGTON													
Philadelphia, Pa.													
Lightning	Hydro	240	11-6	3-10	100	Spruce	⅜ Veneer	1	35				AB
Rocket	Hydro	260	13-6	4-0	150	Spruce	⅜ Veneer			45	45		AB
Flash	Hydro	310	14-0	4-4	190	Spruce	⅜ Veneer				50	50	AB
LYMAN													
Sandusky, Ohio													
8 Speed Tender	Round		8-0	4-0	115	Oak	Cypress	4					O
9 Speed Tender	Round		9-0	4-6	130	Oak	Cypress	5					O
10 Speed Tender	Round		10-0	4-6	145	Oak	Cypress	5					O
11 Speed Tender	Round		11-0	4-6	160	Oak	Cypress or Mahog.	6					O
13 Open Sea Skiff	Round		13-0	4-8	200	Oak	Cypress or Mahog.	5					O
15 Open Sea Skiff	Round		15-0	4-8	225	Oak	Cypress or Mahog.	6					O
13 Speed Runabout	Round		13-0	4-8	260	Oak	Mahogany	5					O
15 Speed Runabout	Round		15-0	5-0	325	Oak	Mahogany	6					AX
15 De Luxe Sp. Runabout	Round		15-0	5-0	450	Oak	Mahogany	6					ACXL
17 De Luxe Sp. Runabout	Round		17-0	5-8	600	Oak	Mahogany	8					ACXL
MULLINS													
Salem, Ohio													
Lark	Round	170	14-0	4-4	270	½ x 1¼ Oak	Galv. Iron	5	10				
Dolphin	Vee	297	15-0	4-8	400	⅞ x 5 Spruce	G. I. & Stainless St'l	6		25	30	33	
Albatross	Vee	390	15-0	4-8	475	⅞ x 5 Spruce	G. I. & Stainless St'l	6		25	30	33	
Flamingo	Vee	550	15-0	4-8	500	⅞ x 5 Spruce	G. I. & Stainless St'l	6		25	30	33	AC
Roadster	Vee	495	15-0	4-9	395	⅞ x 5 Spruce	G. I. & Stainless St'l	3		25	30	35	AC
Torpedo	Step	400	13-6	4-3	200	⅞ x 4½ to 6½ Spruce	G. I. & Stainless St'l	1		35	40	45	AC
Tarpon	Step	475	13-6	4-3	225	⅞ x 4½ to 6½ Spruce	G. I. & Stainless St'l	3		35	40	45	AC
OLD TOWN													
Old Town, Me.													
Sea Model—Canvas	Vee	160-175	16-0	4-0	210	Cedar	Cedar	7		15	20		
Sea Model—Wood	Vee	160	14-0	4-0	200	Oak	Cedar	7		15	22		
Sea Model—Wood	Vee	175	16-0	4-2	260	Oak	Cedar	7		14	20	25	
Sea Model—Wood	Vee	230	18-0	4-8	325	Oak	Cedar	8		10	16	20	
Baby Buzz	Vee	230	16-0	4-3	230	Cedar	Cedar	5		20	25	30	

Key to Equipment Symbols

A—Steering Wheel; B—Remote Control; C—Cushions; D—Windshield; E—Fire Extinguisher; F—Flag Staff; H—Boat Hook; J—Life Jackets; O—Oars; L—Running Lights; P—Pump; W—Whistle; X—Paddle

(*Continued on page* 422)

DIRECT POWER Unfaltering Performance
Amazing Agility . . . Increased Speed . . Dependable Fuel Supply . . . . ASSURED!



HERE is startling good news for all power-boat enthusiasts... and more especially for *Outboard* owners. For now, with Autopulse, sufficient fuel is available at all times—regardless of type of motor, speed, vibration, violent motion or extreme angles. ¶ This amazing, never-failing electric fuel pump . . . alive with the turn of the ignition switch . . . guarantees a positive fuel supply by forcing gas direct from tank to carburetor . . . automatically and instantly adjusting itself to all speeds. ¶ And while Autopulse is applicable to and valuable for any gasoline boat power plant, it is doubly resultful for the *Outboard* ... because Autopulse allows the use of an auxiliary or storage tank at a safe distance from the motor ... letting you travel afar ... eliminating the fuss and bother of frequent refillings of motor tank, with attendant fire hazard. ¶ So thoroughly has Autopulse proven itself under all conditions . . . giving the motor constantly available power, agility, and greater speed . . . that many of the outstanding builders of boats have adopted it as standard equipment. And the experienced, consistent winners in gruelling competition invariably install this assurance of maximum efficiency. ¶ Autopulse-equipped outboards won from Milwaukee to Chicago, at Peoria, Gloucester and many other places last year . . . while inboards, so equipped, won the New York Sweepstakes, President's Cup, Detroit and other contests. ¶ Should you not have this addition to perfect motor performance, see your marine dealer. Learn how quickly, simply and economically Autopulse can be installed on your craft, regardless of its type.

AUTOPULSE CORPORATION
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Autopulse for your motor car, too, adds pep, effects quick starting in zero weather, makes you forget about second gear on steepest hills . . . eliminates fuel feed troubles prevalent with other inadequate systems.

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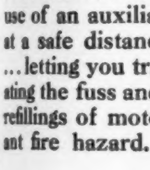

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2821 Brooklyn Ave., Detroit, Michigan
Please send me FREE copy of interesting folder, "Adding HEART to Your Motor," which tells all about Autopulse and what it will do for my
Outboard Motor ☐ Inboard Motor ☐
(*Check type in which you are interested*)

Name ________________

Street Address ________________

City __________ *State* __________

SPECIFICATIONS OF OUTBOARD BOATS

(*Continued from page* 420)

Name or Number of Model	Type of Bottom, Vee, Round or Step	Price	Length Feet	Beam Feet	Weight	Material and Size of Frames	Material Planking	Persons Carried	SPEED CLAIMED WITH MOTOR				*Equipment
									Class A	Class B	Class C	Class D	
OLD TOWN Continued													
Raceplane	Vee	225	11-8	3-10	140	Spruce	Mahogany	3	.....	35	40	.....	
Square Stern	Vee	100-115	16-0	3-8	165	Cedar	Cedar	8	11	18	.....	.....	
Square Stern—Sponson	Vee	120-135	16-0	4-2	190	Cedar	Cedar	8	10	17	.....	.....	
Dinghy	Round	99-109	7-6	3-6	85	Cedar	Cedar	5	10	.....	.....	.....	
Dinghy	Round	102-112	9-0	3-10	115	Cedar	Cedar	5	10	.....	.....	.....	
Dinghy	Round	113-123	11-6	4-4	150	Cedar	Cedar	7	8	12	.....	.....	
Square End Canoe	Round	79-84	18-0	3-4	105	Cedar	Cedar	4	10	.....	.....	.....	
OWENS **Annapolis, Md.**													
18 Runabout	Vee	375	18-0	5-9	280	Oak	Mahogany	6	12	19	23	30	CEFHJLPWX
PENN YAN **Penn Yan, N. Y.**													
Motocub	Vee	150	9-0	4-2	135	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	2	.....	.....	.....	.....	
Motobear	Vee	170	11-0	4-2	150	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	3	.....	.....	.....	.....	
Playmate	Vee	190	15-0	4-2	185	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	4	.....	.....	.....	.....	
Super Buzz	Vee	225	16-0	4-6	245	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	5	.....	.....	.....	.....	
De Luxe Buzz	Vee	455	16-0	4-6	360	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	5	.....	.....	.....	.....	
Goliath	Vee	352	17-6	5-0	380	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	7	.....	.....	.....	.....	
Aristocrat	Vee	604	17-6	5-0	525	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	7	.....	.....	.....	.....	
Wasp	Step	204	12-0	4-4	150	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	1	.....	.....	.....	.....	
Ceestepper	Step	244	14-0	4-6	190	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	1	.....	.....	.....	.....	
Marathoner	Step	340	14-0	4-6	190	Pyroxylin Proc. Comp.	Pyroxylin Pro. Com.	2	.....	.....	.....	.....	
PETERBOROUGH **Peterborough, Canada**													
Admiral	Round	250	18-0	5-0	320	$\frac{3}{8}$ x $\frac{7}{8}$ Oak	Cedar	10	.....	15	20	24	
Speedabout	Vee	220	16-0	4-0	220	.....	Cedar	6	.....	15	22	.....	
Kawartha	Round	175	17-0	4-0	230	$\frac{3}{8}$ x $\frac{7}{8}$ Oak	Cedar	6	10	14	20	.....	
Muskoka	Round	140	16-0	3-6	180	$\frac{3}{8}$ x $\frac{7}{8}$ Oak	Cedar	5	10	14	20	.....	
Rosseau	Round	120	15-0	3-6	130	$\frac{3}{8}$ x $\frac{7}{8}$ Oak	Cedar	5	10	14	.....	.....	
Sea Hawk	Vee	675	17-0	5-0	450	.....	Mahogany	6	.....	14	22	28	
Water-Dart	Step	275	14-0	4-0	165	.....	Mahogany	3	.....	16	26	32	
PIGEON HOLLOW SPAR **East Boston, Mass.**													
Three Star	Round	325	12-0	4-6	180	$\frac{3}{8}$ x $\frac{3}{4}$ Mahogany	Mahogany	2	.....	.....	.....	.....	
Three Star	Round	350	14-0	4-0	190	$\frac{3}{8}$ x $\frac{3}{4}$ Mahogany	Mahogany	4	.....	.....	.....	.....	
Three Star	Round	450	14-0	4-6	250	$\frac{3}{8}$ x $\frac{3}{4}$ Mahogany	Mahogany	6	.....	.....	.....	.....	
PORTEUS **Hartford, Conn.**													
A	Oval Step	235	10-3	3-10	100	$\frac{5}{8}$ x $2\frac{3}{4}$ Spruce	Mahogany	1	$26\frac{1}{2}$	.....	.....	.....	
B and C	Oval Step	255	11-6	4-0	150	$\frac{5}{8}$ x $2\frac{3}{4}$ Spruce	Mahogany	1	.....	40	.....	.....	
RAMSEY **Miami, Florida**													
HeeH	Step	200	8-0	3-4	100	Mahogany	Mahogany	1	.....	.....	.....	.....	
HeeH	Step	225	10-4	3-$7\frac{1}{2}$	150	Mahogany	Mahogany	1	.....	.....	.....	.....	
HeeH	Step	250	12-6	4-$0\frac{1}{2}$	190	Mahogany	Mahogany	2	.....	.....	.....	.....	
Ramseybout	.....	350	16-6	5-2	.....	Mahogany	Mahogany	8	.....	.....	30	.....	
Ramseybout	.....	450	16-6	5-2	.....	Mahogany	Mahogany	8	.....	.....	28	.....	CL
Fisherbout	.....	65	12-6	4-0	200	Cypress	Cypress	4	.....	.....	.....	.....	
REABER BOAT CO. **Seattle, Wash.**													
Sportboat	Round	585	18-0	5-6	900	$\frac{3}{4}$ x 1 Oak	Cedar	.....	.....	10	14	18	CL
RHINELANDER **Rhinelander, Wis.**													
Spee-Dee-Vee No. 85	Vee	225	16-0	4-0	225	Oak	Mahogany	5	.....	25	to	35	CL
Flying Cloud No. 100	Step	325	16-0	4-10	350	Oak	Mahogany	4	.....	.....	30	40	CL
Clipper No. 120	Vee	350	18-0	5-0	375	Oak	Mahogany	8	.....	20	35	.....	CL
Invader No. 150	Round	150	18-0	4-4	325	Oak	Mahogany	8	20	30	.....	.....	O
RICHARDS **Miami, Florida**													
Family Runabout No. 100	Round	185	15-0	4-4	150	Cedar	Cedar	6	.....	.....	.....	.....	O
Family Runabout No. 200	Round	185	15-0	4-4	165	$\frac{1}{2}$ x $\frac{5}{8}$ Oak	Cedar or Cypress	6	.....	.....	.....	.....	O
SANDUSKY **Sandusky, Ohio**													
Midget 11	Round	175	11-0	4-6	167	$\frac{7}{8}$ x $\frac{7}{16}$ Oak	Mahogany	4	15	25	.....	.....	O
Lucky 13	Round	200	13-0	4-6	195	$\frac{7}{8}$ x $\frac{7}{16}$ Oak	Mahogany	6	.....	22	30	.....	O
Big 15	Round	225	15-0	4-8	215	$\frac{7}{8}$ x $\frac{7}{16}$ Oak	Mahogany	8	.....	20	25	33	O
Big 15	Round	300	15-0	4-8	215	$\frac{7}{8}$ x $\frac{7}{16}$ Oak	Mahogany	8	.....	20	25	33	CFLO
Big 15—Special	Round	450	15-0	5-3	300	$\frac{7}{8}$ x $\frac{1}{2}$ Oak	Mahogany	10	.....	20	25	33	CFLO
SCRUGGS **Milton, Florida**													
A Special	Round	87	12-0	3-8	170	$\frac{9}{16}$ x $\frac{7}{8}$ Oak	Cedar	3	14	22	.....	.....	
14 Open	Round	125	14-0	4-0	185	$\frac{5}{8}$ x $\frac{7}{8}$ Oak	Cedar	4	10	21	28	.....	
14 Runabout	Round	165	14-0	4-0	195	$\frac{5}{8}$ x $\frac{7}{8}$ Oak	Cedar	4	10	21	28	.....	
15 Runabout	Vee	195	15-0	4-0	185	$\frac{5}{8}$ x $2\frac{1}{2}$ Mahogany	Cedar	4	.....	22	29	32	
14 Runabout	Round	260	14-0	4-0	200	$\frac{5}{8}$ x $\frac{7}{8}$ Oak	Mahogany	4	10	21	28	.....	CFLWX
16 Open	Round	142	16-0	4-6	200	$\frac{11}{16}$ x $\frac{7}{8}$ Oak	Cedar	6	.....	19	26	30	
16 Runabout	Round	185	16-0	4-6	215	$\frac{11}{16}$ x $\frac{7}{8}$ Oak	Cedar	6	.....	19	26	30	
16 Runabout	Round	285	16-0	4-6	225	$\frac{11}{16}$ x $\frac{7}{8}$ Oak	Mahogany	6	.....	19	26	30	CFLWX
18 Open	Round	225	18-0	5-3	250	$\frac{3}{4}$ x 1 Oak	Cedar	8	.....	12	21	24	
18 Runabout	Round	285	18-0	5-3	285	$\frac{3}{4}$ x 1 Oak	Cedar	8	.....	12	21	24	
18 Runabout	Round	395	18-0	5-3	310	$\frac{3}{4}$ x 1 Oak	Mahogany	8	.....	12	21	24	CFLWX
19 Cruiser	Round	345	18-6	5-8	365	$\frac{3}{4}$ x 1 Oak	Cedar	8	.....	10	16	18	CFHX
22 Cruiser	Vee	1285	22-0	7-0	1100	$\frac{3}{4}$ x $3\frac{1}{2}$ Mahogany	Cedar	8	.....	.....	12	16	CEFHLPWX
SEABRIGHT DORY WKS **Long Branch, N. J.**													
Seaman Sea Skiff	Sea Skiff	750	16-0	5-0	.....	6	$\frac{7}{8}$ Lap	.....	.....	.....	26	.....	EFLW

* **Key to Equipment Symbols**
A—Steering Wheel; B—Remote Control; C—Cushions; D—Windshield; E—Fire Extinguisher; F—Flag Staff; H—Boat Hook; J—Life Jackets; O—Oars; L—Running Lights; P—Pump; W—Whistle; X—Paddle

(*Continued on page* 424)

L. E. Preston in his Penn Yan "Cee-stepper" with which he established new competition record at Gold Cup Regatta, Red Bank, N. J.

PENN YAN
CEESTEPPER

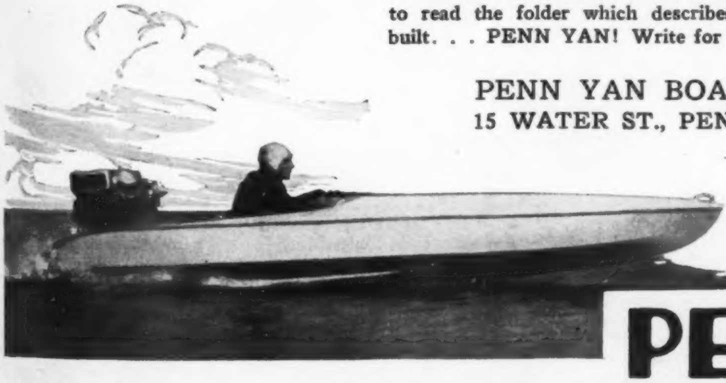
Fastest

Outboard Racing Boats in the World

...and therefore the largest selling!

With more "wins" to their credit—with a greater record for STABILITY and ENDURANCE—there is little wonder that more PENN YAN Racing Hydroplanes are in action than any other outboard racing boats made. Tested in actual races time and again, PENN YAN Boats have proved the merit of their exclusive features—a round bilge combined with longitudinal step for stability and greater speed on turns—careful combination of beam, planing angles and step-position for flat running and speed on the straight-away—precise balance for speed on the get-away—plus the composition construction which means no leaking and no water soaking which in turn means less weight and therefore more speed! If the red-blooded thrills of outboard racing interest you—you will want to read the folder which describes the fastest outboard racing boats built. . . PENN YAN! Write for it.

PENN YAN BOAT COMPANY, Inc.
15 WATER ST., PENN YAN, NEW YORK



PENN YAN
OUTBOARD RACING BOATS

SPECIFICATIONS OF OUTBOARD BOATS

(Continued from page 422)

Name or Number of Model	Type of Bottom, Vee, Round or Step	Price	Length Feet	Beam Feet	Weight	Material and Size of Frames	Material Planking	Persons Carried	SPEED CLAIMED WITH MOTOR				*Equipment
									Class A	Class B	Class C	Class D	
SEA SLED													
West Mystic, Conn.													
13 Open	Inv. Vee	195	13-1½	4-2	245	Oak	Mahogany	4	......	23	27	35	
14 Runabout	Inv. Vee	225	13-1½	4-2	275	Oak	Mahogany	4	......	22	26	35	
16 Runabout	Inv. Vee	415	15-10½	4-5	340	Oak	Mahogany	4	......	20	25	30	
18 Cruiser	Inv. Vee	815	19-9½	4-11	530	Oak	Mahogany	5	......	......	......	25	
SHELL LAKE BOATS													
Shell Lake, Wis.													
High Speed Fish Boat	Round	88½	15-0	3-9	190	½ x ⅞ Oak	Cedar	6	8	20	30	35	
High Speed Fish Boat	Round	98½	16-0	3-10	210	½ x ⅞ Oak	Cedar	7	8	20	31	36	
All Purpose Boat	Step	145	16-0	4-6	250	Oak	Cedar	8	7	20	32	38	
Sea Gull	Round	68½	15-0	3-8	185	Oak	Cedar	6	8	15	20	......	
Cormorant	Round	78½	16-0	3-10	200	Oak	Cedar	7	8	16	24	......	
Dog Fish	Step	175	12-0	3-10	120	¾ x 2 Spruce	Mahogany	2	10	34	45	47	
Dog Fish De Luxe *	Step	250	12-0	3-10	130	¾ x 2 Spruce	Mahogany	3	10	33	44	46	
Drake Mallard	Round	56	12-2	3-7	75	Cedar	Cedar	3	8	10	......	......	
SKANEATELES													
Skaneateles, N. Y.													
Camp Model	Round	110	14-0	3-8	145	Oak & Elm	Cedar	5	9	12	......	......	O
16	Round	145	16-0	4-0	165	Oak & Elm	Cedar	7	8	16	......	......	O
Family Speeder A	Round	350	15-6	4-9	275	Oak & Elm	Cedar	6	......	12	22	28	CFHLX
Family Speeder B	Round	275	15-6	4-9	195	Oak & Elm	Cedar	8	......	15	23	30	CFHLX
STEELCRAFT													
Boston, Mass.													
Baby Steelcraft	Double Concave	290	12-0	4-6	210	....	18-ga. Armco Iron	4	......	30	35	38	JX
Miss Steelcraft	Double Concave	425	15-0	4-6	325	....	18-ga. Armco Iron	4	......	25	33	35	ADJX
STURGEON BAY													
Sturgeon Bay, Wis.													
14	Round	155	14-0	4-6	210	⅝ x 1¼ Oak	½ Cedar or Mah.	5	12	20	30	34	O
16	Round	175	16-0	4-8	258	⅝ x 1½ Oak	½ Cedar or Mah.	8	8	16	26	30	O
18	Round	250	18-0	4-8	400	⅝ x 1½ Oak	½ Cedar or Mah.	10	......	......	20	24	O
SUNFLOWER													
Lake Tomahawk, Wis.													
Steady Rider No. 20	Vee	185-225	16-0	4-0	225	Mahogany or Cedar	Mahogany or Cedar	6	......	......	30	......	
Sunflower Special No. 15	Concave	125	13-6	4-0	125	Cedar	Cedar	3	......	30	40	......	
No. 30	Round	100	16-0	4-2	200	Oak	Cedar	7	......	......	25	......	
THOMPSON													
Peshtigo, Wis.													
Hi Speed Fish Boat	Round	106	14-0	4-0	180	Oak	Cedar	7	......	26	31	36	
Hi Speed Fish Boat	Round	120	16-0	4-2	195	Oak	Cedar	9	......	25	30	35	
Family Speedabout	Round	124	14-0	4-0	190	Oak	Cedar	6	......	26	31	36	
Family Speedabout	Round	138	16-0	4-2	210	Oak	Cedar	9	......	25	30	35	
Family Speedabout	Round	178	18-0	4-6	300	Oak	Cedar	11	......	20	26	32	
Elite Speedster	Round	154	14-0	4-0	190	Oak	Cedar	6	......	26	31	36	
Elite Speedster	Round	167	16-0	4-2	210	Oak	Cedar	9	......	25	30	35	
Elite Speedster	Round	212	18-0	4-6	300	Oak	Cedar	11	......	20	26	32	
De Luxe	Vee	250	16-0	4-2	275	Mahogany	Mahogany	6	......	24	28	34	
Frantic 77	Step	130	12-0	3-10	110	Spruce	Cedar	2	......	35	40	45	
Frantic 88	Step	150	14-0	4-6	130	Spruce	Cedar	2	......	32	38	45	
TOPPAN													
Medford, Mass.													
Toppan 12	Dory	96	12-3	4-4	175	Oak	Pine	5	9	14	......	......	O
Toppan 15	Dory	115	15-3	4-6	250	Oak	Pine	7	7	13	17	......	O
Toppan 16	Dory	140	16-3	4-9	325	Oak	Pine	8	......	13	16	20	O
Toppan 18	Dory	180	18-3	5-0	400	Oak	Pine	10	......	12	15	19	O
TREGONING													
Seattle, Wash.													
16 Steel	Round	225	16-0	4-4	450	Galv. Steel	Steel	6	......	16	20	27	
16 Clinker	Round	195	16-0	4-4	300	Oak	Cedar	6	......	16	20	27	
14 Clinker	Round	150	14-0	4-2	250	Oak	Cedar	4	10	18	22	......	
WATERWITCH													
Benton Harbor, Mich.													
Runabout	Vee	......	16-0	4-6	375	¾ Mahogany	Mahogany	6	......	......	......	35	CFL
Step Runabout	Step	......	15-0	4-5	255	¾ Mahogany	Mahogany	5	......	......	32	38	CFL
Stepabout	Step	......	13-6	4-0	190	⅝ Mahogany	Mahogany	4	......	......	36	40	C
A Racer	Step	......	11-0	3-10	100	½ Mahogany	Mahogany	1	26	......	......	......	
B-C Racer	Step	......	13-0	4-2	150	⅝ Mahogany	Mahogany	1	......	41	43	......	
E Racer	Step	......	15-0	4-5	190	⅝ Mahogany	Mahogany	1	......	......	......	46	

*** Key to Equipment Symbols**

A—Steering Wheel; B—Remote Control; C—Cushions; D—Windshield; E—Fire Extinguisher; F—Flag Staff; H—Boat Hook; J—Life Jackets; O—Oars; L—Running Lights; P—Pump; W—Whistle; X—Paddle

CAILLE FITTED WITH STARTER

A further important improvement contributing to greater convenience and ease of handling is the Electric Starter to be supplied as extra equipment on the new 1930 Caille Red Heads, Class B and C.

This starter unit is built integral with the motor and is operated by means of a 6-volt Willard Storage Battery. An automatic cut-out and cut-in control is provided for the generator. The generator cuts out automatically at 14 amperes. The entire unit is self contained and there are no exposed moving parts.

In addition to providing greater ease of starting, this unit also provides current for operating running lights, electric horn and other items of equipment.

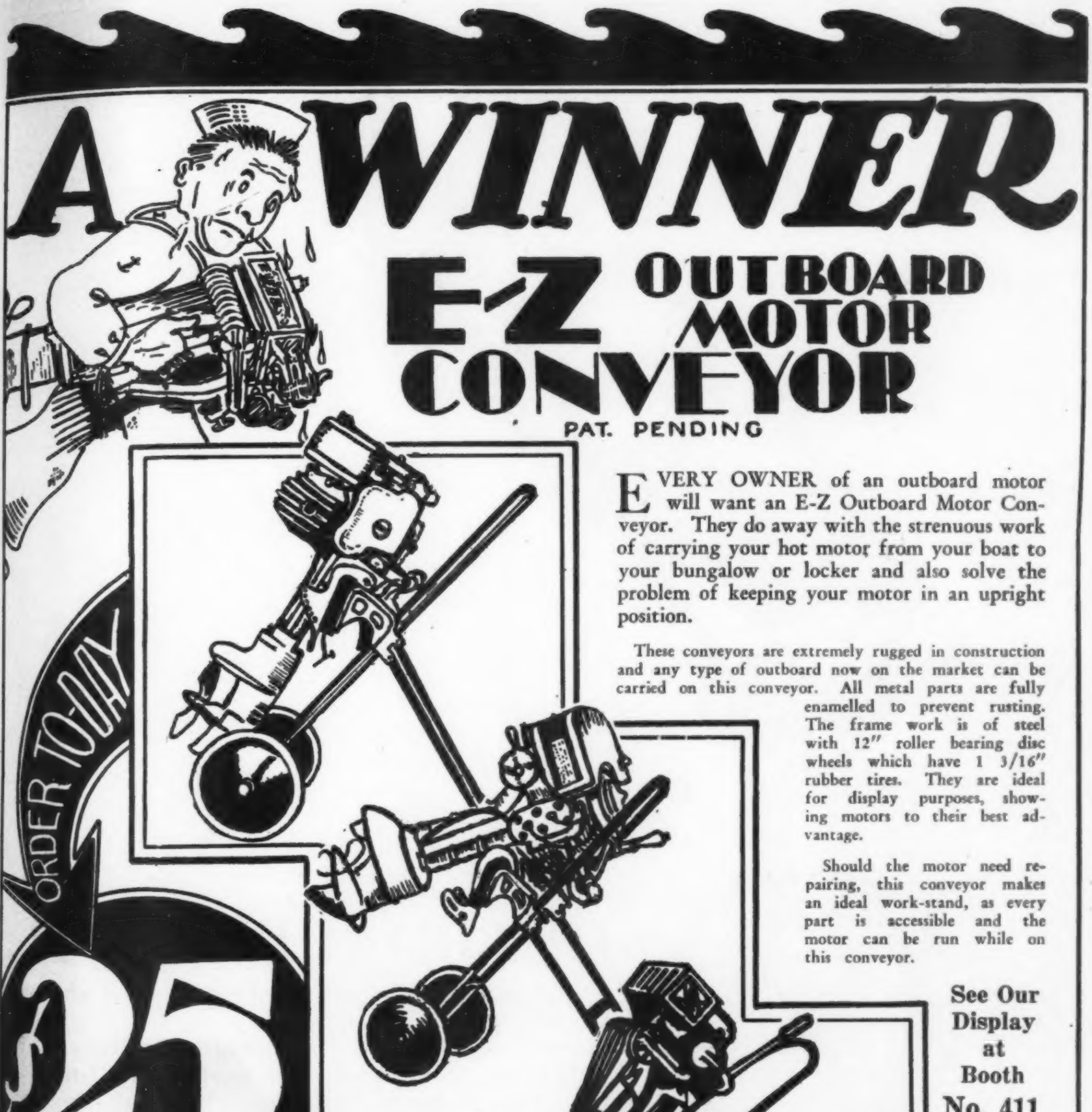
With the additional feature of the electric starter an entirely new standard of outboard motor performance has been established. Convenience, safety and ease of handling have been perfected to an unusual degree.

THRILLS IN SKIBOARDING

Most thrilling of all water sports, with excitement packed into every minute is Skiboarding—a sport in which the driver or operator skims across the surface of the water at breath-taking speed on a light craft, riding and handling it like an aquaplane but being propelled by a speedy outboard motor.

The Skiboard, small as it is, is surprisingly stable, being non-sinkable, non-collapsible and practically non-capsizable. The outboard motor driving it is attached rigidly to the stern, and the flying craft is guided by the driver simply by shifting the weight of his body.

All the thrills of aquaplaning are crowded into the sport with the added feature that the driver is not constrained to follow the course of a towing boat, but is free to pick his course as freely as though he were sitting at the wheel of a runabout. Skiboards are manufactured by the Skiboard Corporation, 72 Hubbard Street, Brooklyn, N. Y.



A WINNER

E-Z OUTBOARD MOTOR CONVEYOR

PAT. PENDING

EVERY OWNER of an outboard motor will want an E-Z Outboard Motor Conveyor. They do away with the strenuous work of carrying your hot motor from your boat to your bungalow or locker and also solve the problem of keeping your motor in an upright position.

These conveyors are extremely rugged in construction and any type of outboard now on the market can be carried on this conveyor. All metal parts are fully enamelled to prevent rusting. The frame work is of steel with 12" roller bearing disc wheels which have 1 3/16" rubber tires. They are ideal for display purposes, showing motors to their best advantage.

Should the motor need repairing, this conveyor makes an ideal work-stand, as every part is accessible and the motor can be run while on this conveyor.

See Our Display at Booth No. 411

Annual National Motor Boat Show

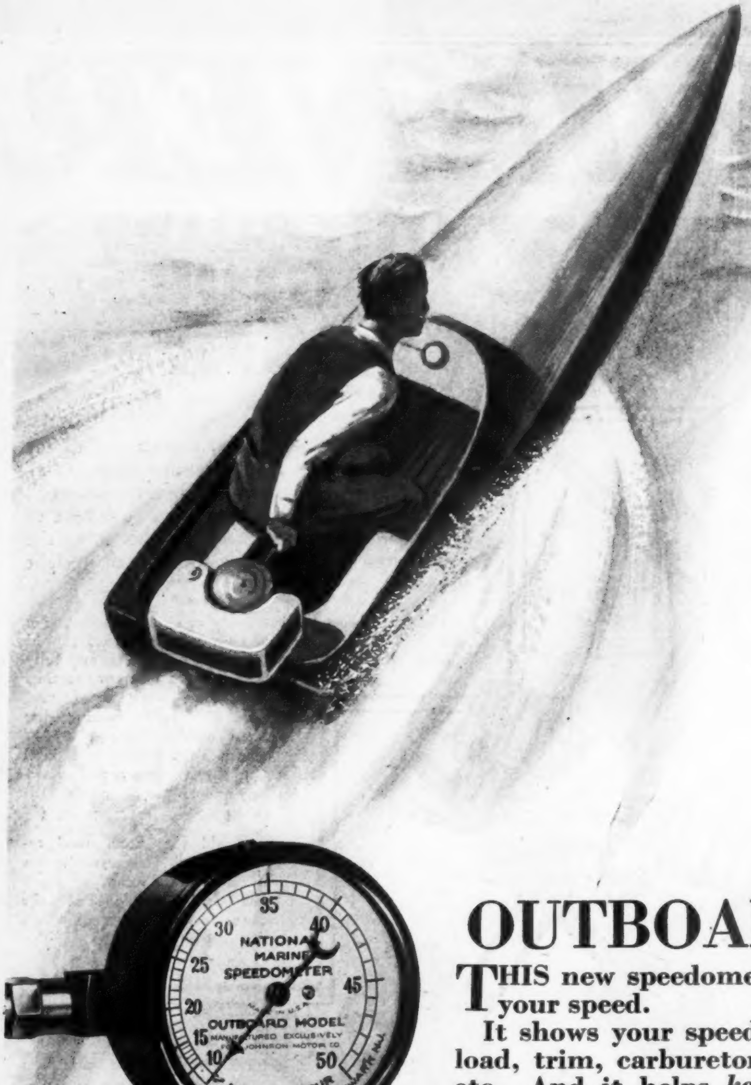
Order early as freight shipments are far cheaper than express, also assuring you delivery when you want it.

THE E-Z OUTBOARD MOTOR CONVEYOR, Inc.
1363-67 E. 26th St. Brooklyn, N. Y., U. S. A.
Telephone, Navarre 7216

Order To-day

E-Z Outoard Motor Conveyor Co., Inc.
1363-67 East 26th St., Brooklyn, N. Y.

Dear Sir: Enclosed please find check for .... and ship via freight.................. E-Z Conveyor. My make of motor is..........
....
....
Name ....
Address ....


35
30
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NATIONAL MARINE SPEEDOMETER
MADE IN U.S.A.
OUTBOARD MODEL
MANUFACTURED EXCLUSIVELY FOR JOHNSON MOTOR CO
MILES PER HOUR
NATIONAL LOCK WASHER CO. NEWARK N.J.

NATIONAL MARINE
SPEEDOMETER
OUTBOARD MODEL

OUTBOARD AHOY!

THIS new speedometer tells you at a glance your speed.

It shows your speed under all conditions of load, trim, carburetor and spark adjustment, etc. And it helps *keep* your boat up to its greatest efficiency.

You can install it in a few minutes, instantly remove it and reinstall it as quickly. Trouble-proof, dependable. Once you use it you will never go without it.

NATIONAL MARINE SPEEDOMETER
Outboard Model indicates speed up to 50 M.P.H., $18.50

For sale by all Johnson Motor Company dealers.
Send today for booklet to

THE NATIONAL LOCK WASHER CO.
40 Hermon Street, Newark, New Jersey.

THE NATIONAL LOCK WASHER CO., **Motor Boating 2-30**
40 Hermon St., Newark, N. J.

Please send me booklet describing the outboard model of your National Marine Speedometer.

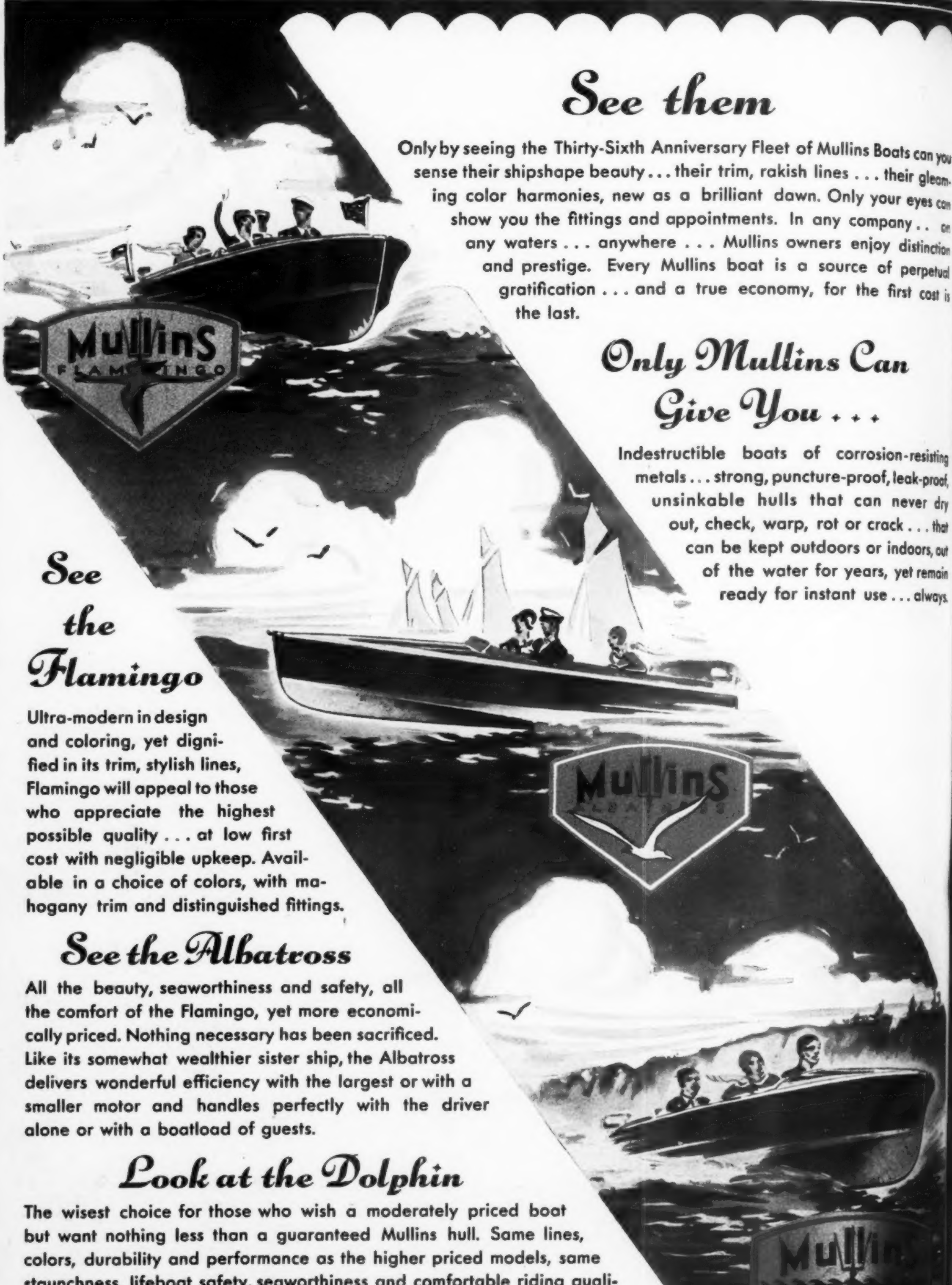
....
NAME
....
ADDRESS

Mullins
CONDIE LAMB

Thirty-Sixth Anniversary Fleet

New Designs + New Colors + New Luxuries + New Speeds

and all the features that have kept Mullins Boats world-famous for more than a generation



See them

Only by seeing the Thirty-Sixth Anniversary Fleet of Mullins Boats can you sense their shipshape beauty . . . their trim, rakish lines . . . their gleaming color harmonies, new as a brilliant dawn. Only your eyes can show you the fittings and appointments. In any company . . on any waters . . . anywhere . . . Mullins owners enjoy distinction and prestige. Every Mullins boat is a source of perpetual gratification . . . and a true economy, for the first cost is the last.

Only Mullins Can Give You . . .

Indestructible boats of corrosion-resisting metals . . . strong, puncture-proof, leak-proof, unsinkable hulls that can never dry out, check, warp, rot or crack . . . that can be kept outdoors or indoors, out of the water for years, yet remain ready for instant use . . . always.

See the Flamingo

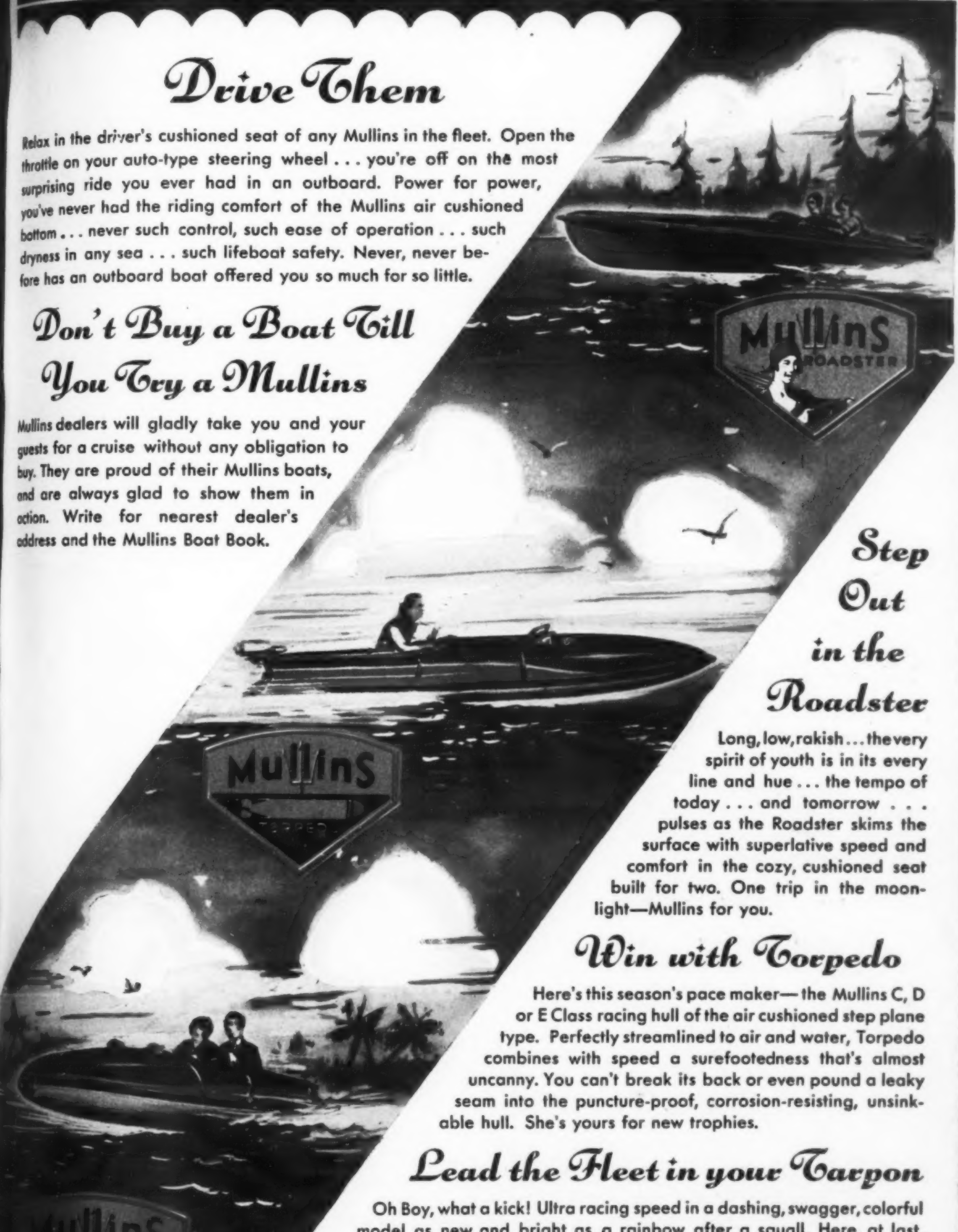
Ultra-modern in design and coloring, yet dignified in its trim, stylish lines, Flamingo will appeal to those who appreciate the highest possible quality . . . at low first cost with negligible upkeep. Available in a choice of colors, with mahogany trim and distinguished fittings.

See the Albatross

All the beauty, seaworthiness and safety, all the comfort of the Flamingo, yet more economically priced. Nothing necessary has been sacrificed. Like its somewhat wealthier sister ship, the Albatross delivers wonderful efficiency with the largest or with a smaller motor and handles perfectly with the driver alone or with a boatload of guests.

Look at the Dolphin

The wisest choice for those who wish a moderately priced boat but want nothing less than a guaranteed Mullins hull. Same lines, colors, durability and performance as the higher priced models, same staunchness, lifeboat safety, seaworthiness and comfortable riding qualities. Unequalled as a utility, family or fishing boat.



Drive Them

Relax in the driver's cushioned seat of any Mullins in the fleet. Open the throttle on your auto-type steering wheel . . . you're off on the most surprising ride you ever had in an outboard. Power for power, you've never had the riding comfort of the Mullins air cushioned bottom . . . never such control, such ease of operation . . . such dryness in any sea . . . such lifeboat safety. Never, never before has an outboard boat offered you so much for so little.

Don't Buy a Boat Till You Try a Mullins

Mullins dealers will gladly take you and your guests for a cruise without any obligation to buy. They are proud of their Mullins boats, and are always glad to show them in action. Write for nearest dealer's address and the Mullins Boat Book.

Step Out in the Roadster

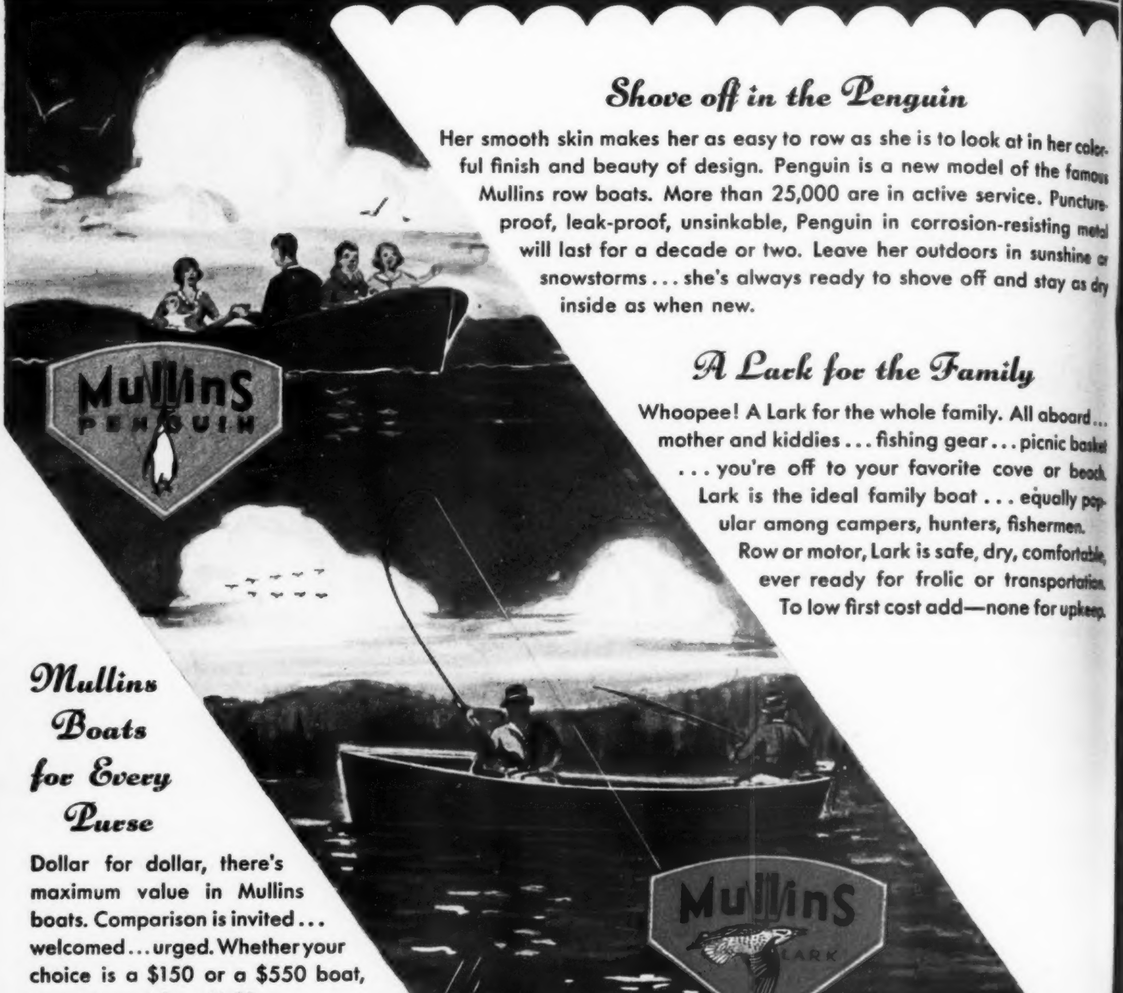
Long, low, rakish . . . the very spirit of youth is in its every line and hue . . . the tempo of today . . . and tomorrow . . . pulses as the Roadster skims the surface with superlative speed and comfort in the cozy, cushioned seat built for two. One trip in the moonlight—Mullins for you.

Win with Torpedo

Here's this season's pace maker— the Mullins C, D or E Class racing hull of the air cushioned step plane type. Perfectly streamlined to air and water, Torpedo combines with speed a surefootedness that's almost uncanny. You can't break its back or even pound a leaky seam into the puncture-proof, corrosion-resisting, unsinkable hull. She's yours for new trophies.

Lead the Fleet in your Tarpon

Oh Boy, what a kick! Ultra racing speed in a dashing, swagger, colorful model as new and bright as a rainbow after a squall. Here, at last, is the racing hull with a cozy, companionable forward cockpit. Cover the cockpit and . . . the racing Tarpon becomes the flashing Torpedo.



Shove off in the Penguin

Her smooth skin makes her as easy to row as she is to look at in her colorful finish and beauty of design. Penguin is a new model of the famous Mullins row boats. More than 25,000 are in active service. Puncture-proof, leak-proof, unsinkable, Penguin in corrosion-resisting metal will last for a decade or two. Leave her outdoors in sunshine or snowstorms . . . she's always ready to shove off and stay as dry inside as when new.

A Lark for the Family

Whoopee! A Lark for the whole family. All aboard . . . mother and kiddies . . . fishing gear . . . picnic basket . . . you're off to your favorite cove or beach. Lark is the ideal family boat . . . equally popular among campers, hunters, fishermen. Row or motor, Lark is safe, dry, comfortable, ever ready for frolic or transportation. To low first cost add—none for upkeep.

Mullins Boats for Every Purse

Dollar for dollar, there's maximum value in Mullins boats. Comparison is invited . . . welcomed . . . urged. Whether your choice is a $150 or a $550 boat, you get most in a Mullins.

Enthusiastic Dealers Invite You to Cruise

Your nearest dealer will gladly take you for a spin or a cruise. He likes to do it . . . largely because seeing and trying Mullins boats makes people want them. Ask for the address of the nearest dealer and see for yourself.

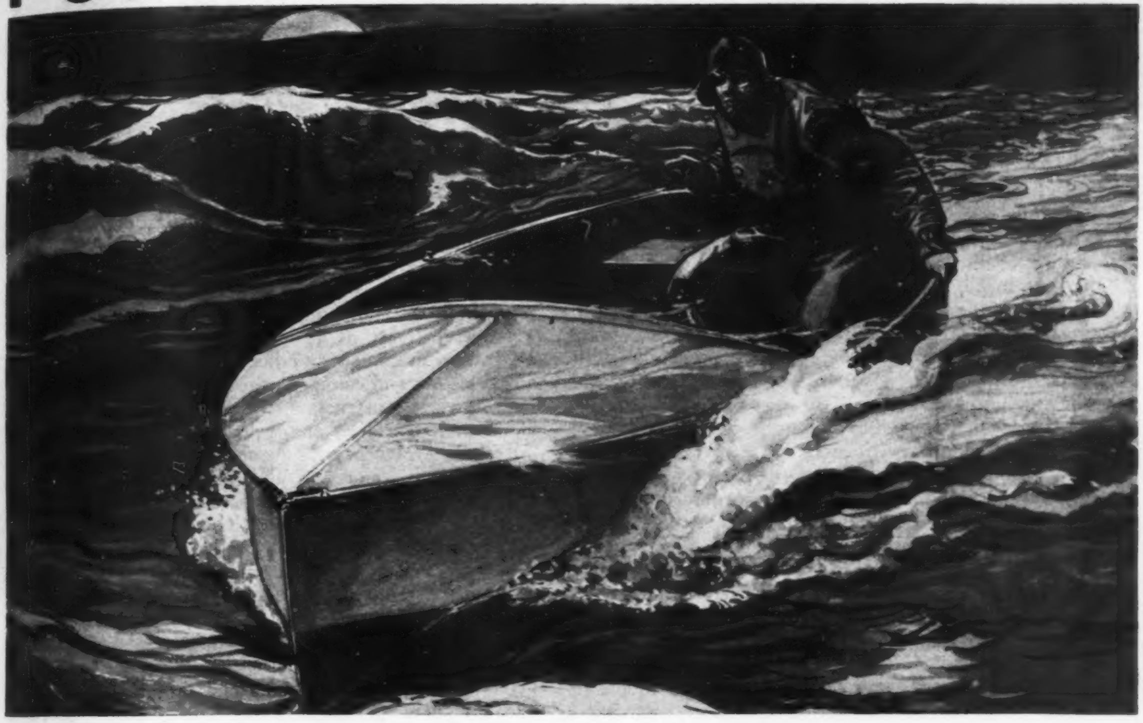
The Mullins Boat Book is a Boat Investment Guide

Clear illustrations of every detail . . . complete descriptions . . . valuable information for every potential boat owner . . . prices . . . colors . . . all in the book. Get it now so you'll have time to choose wisely . . . for a happy, healthful, carefree summer.

MULLINS MANUFACTURING CORPORATION
200 New Garden Street, Salem, Ohio

PRINTED IN U. S. A.
3299

Foul weather or fair



Eveready Hot Shots will continue to supply your motor with unfailing ignition!

HERE is a strong, sturdy battery, encased in a steel shell that grins at hard knocks—the long-lasting, straight-shooting Eveready Hot Shot. • It is absolutely impervious to water—or moisture of any kind. Drenching rain, pelting snow, driving salt-spray never disturb its steady, even, rhythmic flow of snapping, blue-hot sparks. • An Eveready Hot Shot will put new punch and drive into your motor. It will supply you with unfailing ignition in foul weather or fair. If your boat has a waterproof box use Eveready Dry Cells—otherwise always ask for Eveready Hot Shots.

786
EVEREADY
DRY CELL
For Radio-Ignition and all General Purposes
EVEREADY
HOT SHOT BATTERY
for Motor Ignition
NATIONAL CARBON CO., Inc.

NATIONAL CARBON COMPANY, Inc.
General Offices: New York, N. Y.
Branches: Chicago Kansas City New York
San Francisco

UCC

Unit of Union Carbide and Carbon Corporation

OUTBOARDERS HAIL NEW FEATURES

Newest Model Caille Red Heads Provided With Change Speed and Reverse, Electric Starting and Complete Steering Handle Control

WHEN the last outboard hull is hauled out and laid up for the winter, and the last motor is overhauled and placed in storage, yarn spinning and speculation about next season is always rife among outboard motor enthusiasts. The chief subject of discussion is generally motors—what changes will be made, what features will be added. This fall the most widespread of all rumors among the outboarding fraternity has been about Caille. Something definitely new was in the wind, and everybody knew it.

Caille finally has given these whispers reality with the announcement of its 1930 line. For the first time in the history of outboard motors, complete control, with a change of speeds including a reverse, and electric starting, is now offered the thousands who would never know motorboating if it were not for the outboards. The Caille Red Heads, as the new line will be known, will be divided as follows: One Class A light sport motor, two class B, and two Class C motors—one racing, and one utility in each division.

Most interesting, from the general standpoint, will be the Class B and C Utility motors, embodying as they do the new Caille Multi-flexible Control. This device changes the pitch of the wheel by a simple up or down movement of the control handle, giving a neutral speed for starting, a slow reverse for backing out of slips or away from the dock, and two speeds forward—a slow speed for trolling, and a high speed for fast travelling. The control will stay set in any position, and the motor may be thrown instantly from high speed into reverse for quick stops. Thus a flexibility greater than that now found in the average high priced runabout is assured, and perfect control and safety in starting is possible at all times.

Cooling will be accomplished by a centrifugal pump instead of the old force-feed, giving proper motor temperatures at all speeds. This prevents the motor overheating in neutral, and at the same time guarantees a proper delivery of horsepower. Cylinder walls are accurately machined and honed and fitted with balanced pistons and connecting rods for smoothness. Full ball bearing construction throughout insures smooth running, longer life, and a lowered oil consumption. All ports are accurately machined for proper timing of opening and closing. This gives better motor balance, less vibration, and increased fuel economy.

The finest metals and alloys have been used throughout these motors, and all moving parts have been tested on special machines to insure perfect balance and smoothness of operation. The Bosch flywheel magneto is used in combination with the Tillotson carbureter, which is the best possible guarantee of a perfect mixture, and a fat, hot spark at all speeds. This makes even a cold motor start with remarkable ease and quickness.

An adjustable friction feature for putting the control handle in any desired position, or for obtaining any tension on the tiller has been added. Turning a bolt at the lower end of the exhaust outlet quickly gives the friction desired.

(Continued on page 459)

The new Caille Red Head Class B and C service motors with water cooled exhaust and perfectly stream lined housing

The Class B and C caille Racing Motors are generally similar to the service engines but have a lower center of gravity. The propeller is of the tractor type operating in solid water at all times

THE CENTURY LINE for 1930

THE OUTSTANDING

BOATS of the YEAR

See Them at the Silver Anniversary Show

CENTURY—CYCLONE

12'8" by 50" — 150# This FAMOUS Racing Craft for 1930 is lightning FAST.
For WINNING in class B & C Purchase a Cyclone.

CENTURY—MIDGET

10' by 46" — 100#. A Smaller, Lighter edition of its Cyclone sister. Built to LEAD in class A racing. The Lines of the racing Cyclone sisters have been brought up to date by John L. Hacker.

CENTURY—KID

13'6" by 46" — A 3 place SPORT-A-BOUT whose reputation is established as a fast SAFE craft for the whole family.

CENTURY—TRAVELER

17' by 4'10" — An entirely new and DeLuxe outfit in outboard runabouts from Hacker's board. Surprising pleasures await your ownership of the Traveler.

CENTURY—TRAVELER Jr.

17' by 4'10" — The plain sister of the Traveler twins. Same lines. Same performance. Different in finish and appointments.

CENTURY—ARISTOCRAT

A beautiful new CREATION of fine CRAFTMANSHIP in a most Distinctive
Inboard by Hacker. A - 6 Pass. - 30 mi. runabout of real quality.
Powered with Universals' "Blue Jacket".
It's decidedly DIFFERENT.

An entirely New organization, amply financed and ably managed, has taken over the

CENTURY BOAT COMPANY

MANISTEE, MICH.

and will continue the manufacture and sale of the Famous Century Line of boats with two new and DISTINCTIVE ADDITIONS.

ARISTOCRAT ◁————*See*————▷ *TRAVELER*

Distributors — Get the Facts on Century's 1930 Profit Franchise — Dealers

FOUR POPULAR MOTORS

Lockwood Chief With Hand or Electric Starting, Lockwood Ace and Fold Light Reach New Standards of Performance

THE Lockwood Division, Outboard Motors Corporation, introduce finer, more remarkable motors for 1930, which has been ably accomplished through the combined engineering skill of the three staffs of Outboard Motors Corporation, pooling their collective experience toward the perfection of the new 1930 models.

The Lockwood line for 1930, now being produced in the enlarged factory of Outboard Motors Corporation at Milwaukee, embraces four remarkable motor models; the 1930 Chief with electric self-starter, the 1930 Chief with cord starter the perfected Ace—Champion Class A Motor, and the startling new Outboard Motors Corporation Fold-Light. These four motors will unquestionably write new pages in the annals of outboard motor history, reaching new standards of quiet, powerful outboard motor performance.

The Lockwood Chief with electric starter will be a most popular motor as auxiliary power for the sailboat or light cruiser, for the speedy family runabout or fast fishing skiff, or in the rapidly increasing field of commercial water transportation. Its electric self-starting introduces a feature that thousands of outboard motorists have eagerly awaited. No longer is the effort of hand-starting necessary with the Chief. Now the whole family may enjoy all the pleasures of thrilling sport with starting electrically accomplished. Outboard Motors Corporation, in pioneering the introduction of the electric self-starter, feels that it has at once answered the eager hopes of thousands of outboard motor enthusiasts and opened up a new conception of outboard motor enjoyment and usefulness.

The electric starter has been constructed with extreme mechanical simplicity, making it both fool-proof and capable of life-long dependability. It consists of a combined starting and generating unit, working automatically, directly mounted on the crank shaft, which, at the turn of a switch, spins the motor over compression at a continuous speed ample for quick starting. After the motor has been started, the device becomes a generator for replenishing the six-volt storage battery which supplies current for the ignition system and for lighting.

The well known Lockwood Ace. Seven horsepower with two cylinders for family boats and racing

The Lockwood Chief with electric starter intended for larger family boats and runabouts. Equipped with underwater silencer

All motor controls, the starting switch, choke and spark, may be obtained on a conveniently mounted instrument board as additional equipment. Another feature of very great importance is the fact that with the exception of the propeller which is under water, on the electric-starting motors there are no moving parts above water. The cover plate and starting housing completely enclose all moving parts, a feature of the greatest importance.

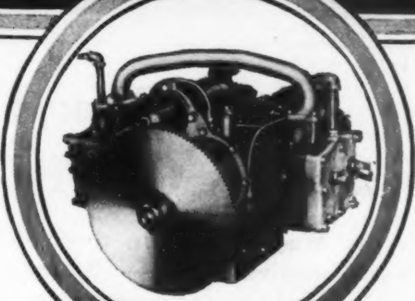
Aside from the electric self-starting, the Chief has other remarkable features, which will insure its continuance as a dominant leader in its class. The Lockwood Pilot, an unseen hand that takes hold of the motor when you let go, the popular feature introduced in the 1929 Chief, is retained in the 1930 model. With the pilot in control of the boat, the operator may relax or do whatever he pleases with his hands—reel in his lines, fill his pipe, gossip—with the pilot in control of the boat a sure course is maintained.

The underwater silencer pioneered by Lockwood in 1929 is also retained in the 1930 Chief and gives smooth, quiet performance with all exhaust gases silently discharged under water. The convenient handle control of the motor speed, which made a distinct appeal to every Lockwood user, is retained in the new Chief.

Suction cooling, with no moving parts to wear, assures a continuous flow of water, maintaining a proper motor temperature. The Lockwood streamline gear housing cuts the water like a knife, offering minimum water resistance, giving added speed to the motor.

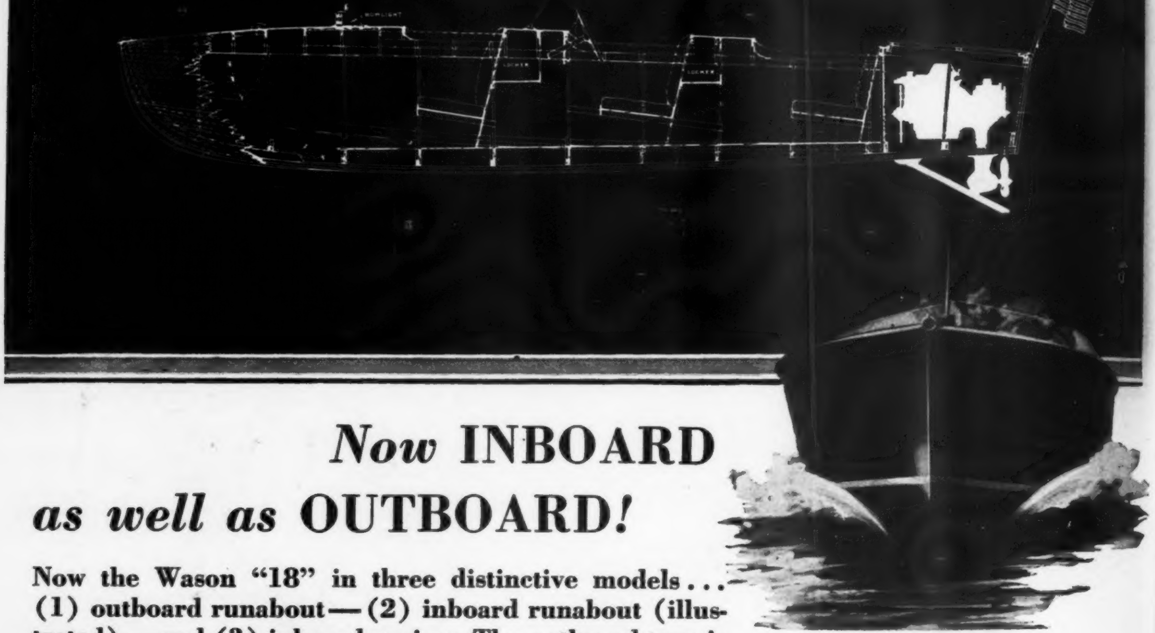
(*Continued on page* 454)

a.c.f. Wason



ANNOUNCING 2 New Boats and A New Engine

The J. G. BRILL COMPANY Sales Headquarters Philadelphia a.c.f. Wason "18"

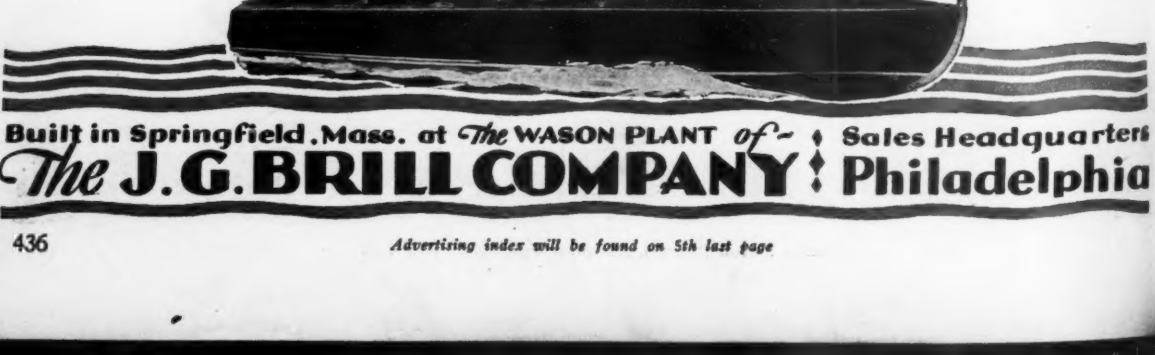


Now INBOARD as well as OUTBOARD!

Now the Wason "18" in three distinctive models . . . (1) outboard runabout—(2) inboard runabout (illustrated)—and (3) inboard cruiser. The outboard type is precisely the same as the 1929 model—so perfect in all its details that no improvement could be made! The inboard is the most advanced boat of its size of the year. Powered with the new BRILL 4 cylinder 40 H.P. Engine. A totally new type of lightweight engine (horizontal!) which takes minimum space and offers fullest hull room for passengers. Note position of this engine in extreme rear of hull and its direct bevel gear drive. Be sure to see the Wason "18" at the Show or write for literature.

SPECIFICATIONS
WASON "18" INBOARD

HULL DESIGN: "V" Bottom Type; Streamline design. DIMENSIONS: 18 feet overall; extreme beam 63"; draft 12" (Cruiser cabin 6 feet long). CONSTRUCTION: Floor timbers and frames of oak; keel, stern, bottom seam battens, chines, planking, deck and cabin of mahogany; brass screws throughout. SEATS and BACKS: runabout has for'd cockpit for 1 person; 2 after cockpits for 3 persons each. (Cruiser also seats 7 persons) life saver cushions. EQUIPMENT: after flagpole with range light; combination bow light and flagpole; switch control from driver's seat; auto steering wheel. WINDSHIELD: auto-type. ENGINE COMPARTMENT: watertight bulkhead rear of after cockpit with BRILL 4 cylinder 40 H.P. engine; direct gear drive; swinging hatch cover with 4 vents. RUDDER: bronze type.

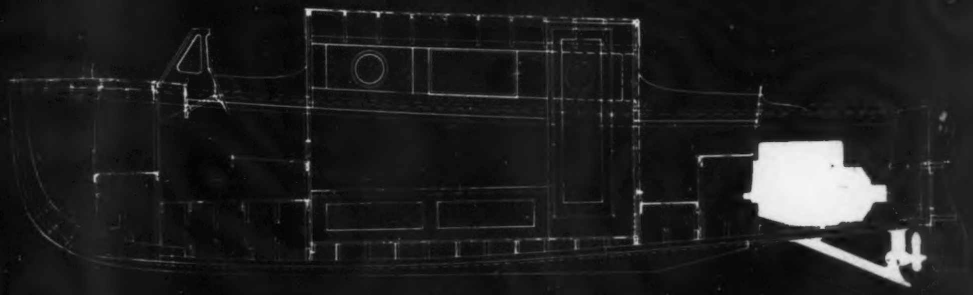


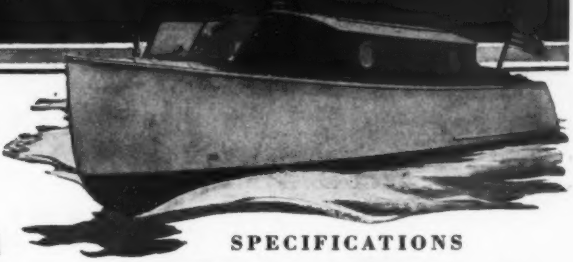
Built in Springfield, Mass. at *The* WASON PLANT *of* — *The* J. G. BRILL COMPANY ◆ Sales Headquarters Philadelphia

a.c.f.

Wason "24"

COMPARE!



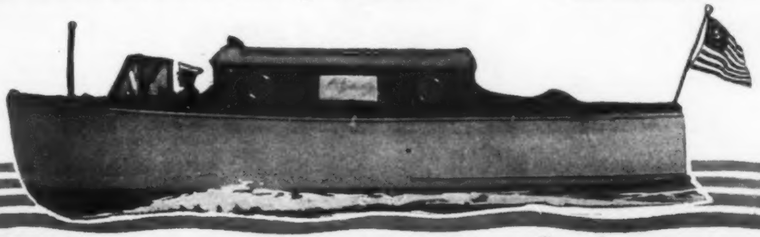


The ROOMIEST 24-*Footer Afloat!*

Designed by one of America's foremost naval architects, this "24" is a totally new boat in her class. Graceful of line, sound of construction, easy to handle, incorporating every feature for safety and comfort, she offers the additional advantage of being the roomiest 24-footer available today. For'd cockpit seats 3 persons comfortably. Spacious after cockpit easily accommodates four. Cabin has folding upper and lower berths for four. Toilet room has every modern convenience. Galley on opposite side is completely equipped. A perfect floating home regardless of weather—all encompassed within 24 feet! Be sure to see this outstanding boat at the Show—or write for further particulars.

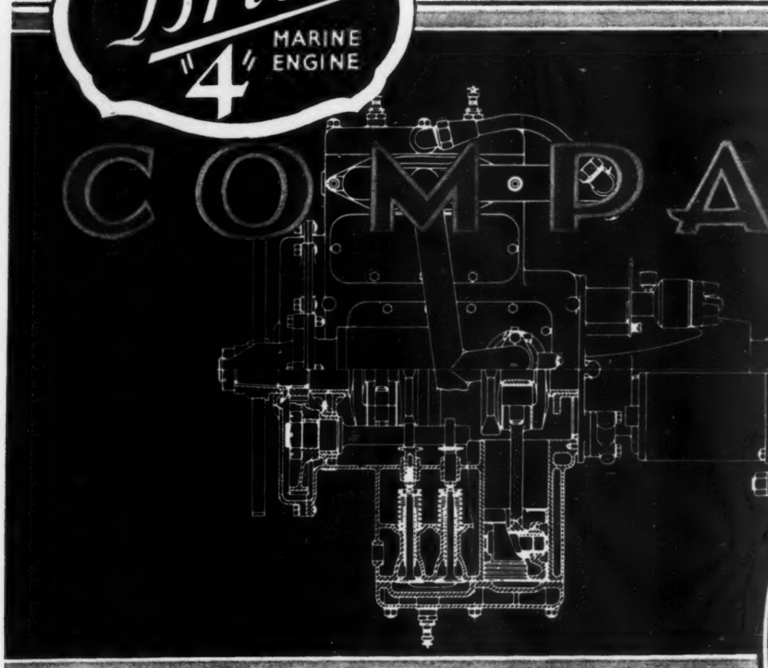
SPECIFICATIONS

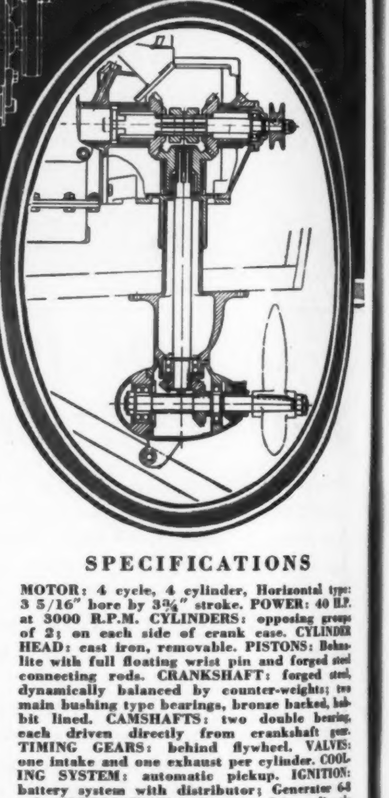
DIMENSIONS: Overall length 24 feet; extreme beam 7' 6"; cabin length 8' 6"; for'd cockpit seats 3; after cockpit seats 4. **CONSTRUCTION:** Keel apron and stern of Oak; frames of Oak. Decking, coaming, hatches, cockpits and cabin of African Mahogany. **CABIN:** fitted with two upper and two lower berths; all cushions, backs and pillows denim covered. **GALLEY:** equipped with enamel metal sink, water supply and alcohol stove. **TOILET:** equipped with latest accessories. **FOR'D COCKPIT:** sloping auto-type windshield; auto-type steering wheel and instruments; upholstered cushions and backs in both cockpits. **ENGINE COMPARTMENT:** in extreme stern and fitted with hatch covers and ventilators; all gearing from engine to propeller in this compartment. **ENGINE:** Gray 6-60, operating propeller through specially designed BRILL Reduction gear drive (see outline above). **EQUIPMENT:** hardware of bronze; forward combination bow end plate and chock; combination bit and flagstaff on for'd deck; bow light on cabin roof; stern flagpole and range light.



Built in Springfield, Mass. at *The* WASON PLANT *of* — Sales Headquarters
The J. G. BRILL COMPANY — Philadelphia

a.c.f.
Brill
"4" MARINE ENGINE





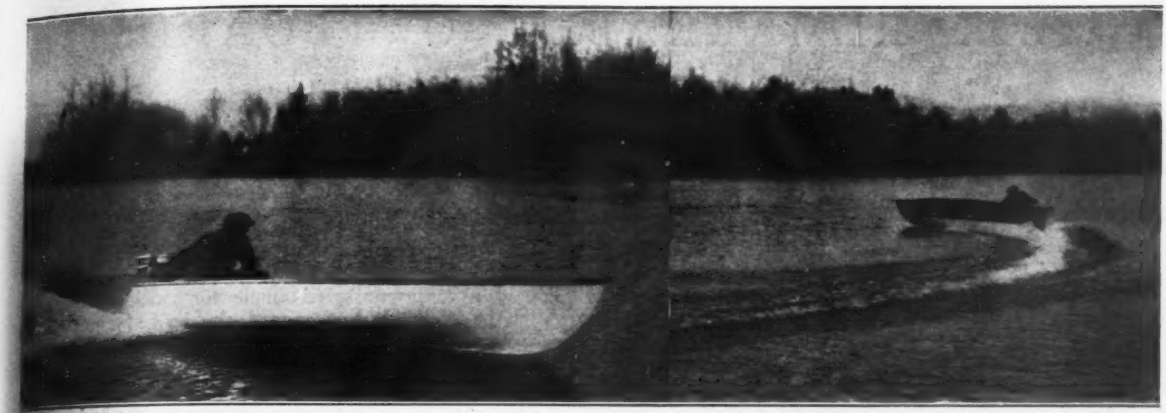
HORIZONTAL
—to save space!
SIMPLIFIED
—to reduce weight!

Here is the engine the small boat field has been waiting for—horizontal type with a set of two opposing cylinders on each side of its forged-steel crankshaft. Designed to produce 40 H.P. at 3000 R.P.M. Overall dimensions only 30 31/32″ by 29⅜″ by only 20¾″ from bottom of oil pan. Fitted with specially designed Brill bevel gear direct drive, this modern engine perfectly fulfills the present demand for a high powered inboard job which takes little room in the small boat. Note installation in the Wason "18" and details of drive in oval above. Be sure to see it at the Show.

SPECIFICATIONS

MOTOR: 4 cycle, 4 cylinder, Horizontal type: 3 5/16″ bore by 3¾″ stroke. **POWER:** 40 H.P. at 3000 R.P.M. **CYLINDERS:** opposing groups of 2; on each side of crank case. **CYLINDER HEAD:** cast iron, removable. **PISTONS:** Bakelite with full floating wrist pin and forged steel connecting rods. **CRANKSHAFT:** forged steel, dynamically balanced by counter-weights; two main bushing type bearings, bronze backed, babbit lined. **CAMSHAFTS:** two double bearing, each driven directly from crankshaft gear. **TIMING GEARS:** behind flywheel. **VALVES:** one intake and one exhaust per cylinder. **COOLING SYSTEM:** automatic pickup. **IGNITION:** battery system with distributor; Generator 6-8 volt. **LUBRICATION:** oil pump driven directly from left camshaft. **DIRECT DRIVE:** two sections in aluminum housings, the upper with two floating bevel gears on main shaft engaged third bevel gear on vertical shaft; sliding clutch for forward or reverse; vertical shaft transfers power to propeller shaft by means of beveled gears. Assembly engine and upper drive housing removable as unit. **STARTING MOTOR:** at top front end engaging flywheel with Bendix pinion. **CRANKCASE AND CYLINDER BLOCK:** cast iron in one piece.

The J.G.BRILL COMPANY ◆ **Sales Headquarter**
Philadelphi



Thompson "Duble Tite" **T-V-T** and **T-V-B**

"The Outboard Motor Boats that Most Buyers Want"

Dealers who sell Thompson-V-Type Outboard Motor Boats have a complete line of strictly up-to-date models to offer the discriminating buyer.

T-V-T Boats have the much wanted speed lines
T-V-T Boats are exceptionally seaworthy
T-V-T Boats are correctly and carefully built
T-V-T Boats are popular in price

The V-Bottom eliminates pounding and causes these boats to bank on the turn. The two-inch keel prevents skidding and enables them to make the shortest possible turn, with the motor wide open. They ride smooth and level with any load at any speed. They are very buoyant on choppy water and ride over large waves instead of cutting through them, which makes them perfectly dry in a sea that would swamp an ordinary boat. They are practically untipable, and absolutely seaworthy.

Made in 4 Sizes—Lengths, 14 to 18 ft.

The wonderful performance and outstanding value of these Outboard Motor Boats make each one a "silent salesman." In speed contests, look for the winner in a Thompson. On family outings, note the confidence Thompson owners have in the seaworthiness of their craft. Wherever you find a group of boat owners, listen to what they have to say about the long life, the sturdy service and great value they found in Thompson Boats.

***DEALERS*—The popular prices at which these Boats are sold assure volume sales because medium price buyers are by far the most numerous. The fact that "Thompson Beats the World on Boats" has made us the World's largest manufacturers of Outboard Motor Boats.**

Ride to Prosperity With Us on the Crest of the T-V-T Wave

Write today for Free Catalog, or see us at the New York Motor Boat Show.

THOMPSON BROTHERS BOAT MFG. CO.

210 Ann Street
PESHTIGO, WISCONSIN

Two Factories
Write to Either Place

110 Elm Street
CORTLAND, NEW YORK

SIX REMARKABLE OUTBOARDS

Engines for Every Type of Boat from the Lightest Canoe to an Outboard Engined Cruiser

NEARLY every lover of the outdoors has at some time or another shared in the hope that the outboard might some day entirely eliminate manual starting. Outboard Motors Corporation, pioneering the electric self-starter now available on two of the 1930 Elto models, feels that through the introduction of the electric starter, the realization of this almost universal desire has been accomplished. With starting effort now entirely eliminated, a new conception of outboard motor usefulness and enjoyment becomes apparent and every member of the family from mother to the children, can now enjoy wholesome outdoor recreation in the family runabout, cruiser, or other type of pleasure craft.

The new 1930 Elto Quad, embodying remarkable new engineering refinements and electric and cord starting, has no parallel in the entire field of outboard or inboard motors. Its mighty power harnessed to lightning-like acceleration and luxurious smoothness of operation is a revelation in outboard motor performance. Electric self-starting totally elminates the effort of hand cranking. Combining this with a score of other new features, the mighty Quad becomes at once the ideal runabout or cruiser installation.

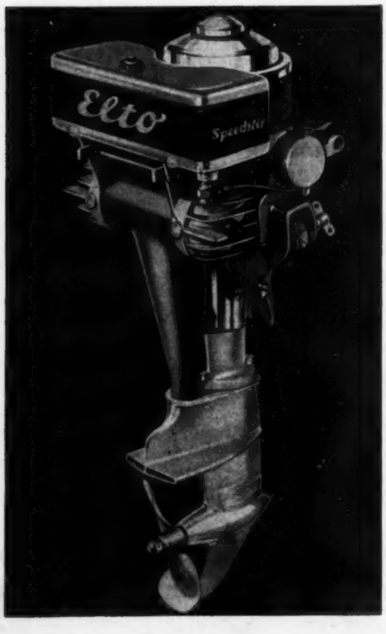
The electric self-starter has been constructed with extreme mechanical simplicity, making it both foolproof and capable of life-long dependability. It consists of a combined starting and generating unit, working automatically, directly mounted on the crank shaft, which, at the turn of a switch, spins the motor over compression at a consistent speed ample for quick starting. After the motor has been started, the device becomes a generator for replenishing the six-volt storage battery which supplies current for the ignition system and for lighting.

By means of an automatic regulator, overcharging the battery becomes impossible. The storage battery, while supplying starting current, makes possible the installation of running lights required by government regulations for boat operation after dark, service lights, or spotlight.

All motor controls, the starting switch, choke, throttle and spark, may be obtained on a conveniently mounted instrument board, as additional equipment. Another feature of great importance is the fact that all moving parts in the motor, with the exception of the propeller, which is underwater, have been enclosed—a new safety feature.

Senior Speedster, a motor which has been under development, testing and perfection for over two years, makes its debut to the outboard world at this time. It is a remarkable new motor, built for staunchness and rugged dependability. It has been developed as a motor that might become a standard for (*Continued on page* 462)

The Fold-Light, a 2-3/4 h.p. folding engine weighing only 29 pounds and of diminutive size



The Elto Senior 14 h.p. Speedster, most dependable for heavy duty made with and without electric starters

The large Elto Quad of 35 h.p. 4 cylinders and adapted to large runabouts and cruisers. Fitted with silent underwater exhaust

A NEW AND IMPROVED

AC Tachometer

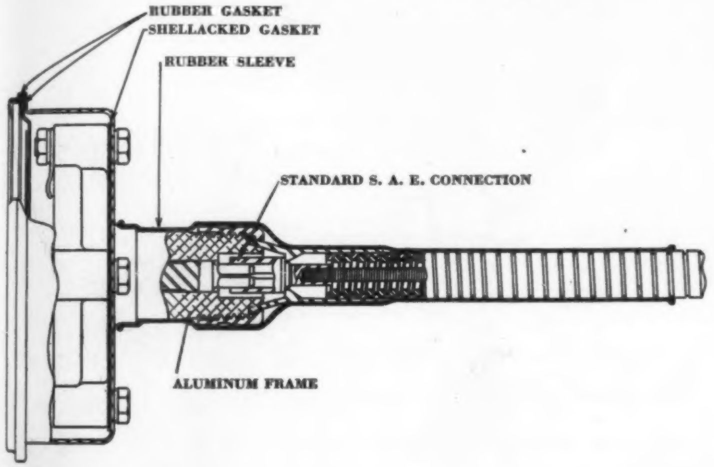
For outboard engines

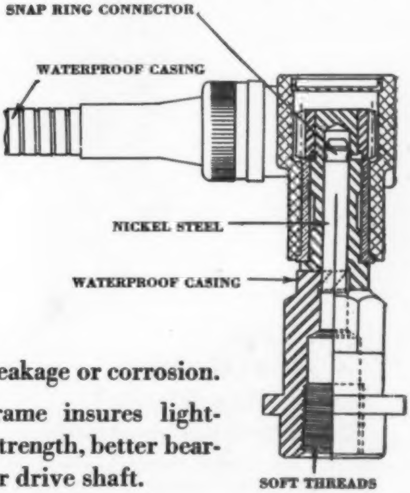
Lower Price · *Now* · $20.00

80
RPM
HUNDREDS
0
10
70
60
20
50
30
40
AC

Absolutely accurate, registering 0 to 8000 R. P. M.

The detailed sketch below shows the important features which have been incorporated in the A C Tachometer installation for outboard engines.


RUBBER GASKET
SHELLACKED GASKET
RUBBER SLEEVE
STANDARD S. A. E. CONNECTION
ALUMINUM FRAME


SNAP RING CONNECTOR
WATERPROOF CASING
NICKEL STEEL
WATERPROOF CASING
SOFT THREADS

WATERPROOF FEATURES

Live rubber gaskets in front and rear of case.

Fibre gasket between case and frame.

Live rubber sleeve encasing shaft at instrument head.

Waterproof casing.

MECHANICAL FEATURES

Snap ring prevents drive adapter from jumping off drive pin in rough water.

Standard S. A. E. connection.

Nickel steel pilot pin and hardened drive nut jaws, to prevent breakage or corrosion.

Aluminum frame insures lightness, greater strength, better bearing surface for drive shaft.

Soft threads in drive nut prevent damage to threads on flywheel shaft.

This new and improved Tachometer is now priced at $20.00 complete (slightly higher in Canada). On display at the New York Motor Boat Show—Spaces 93 and 94—or write us for descriptive folder, giving the name and address of your engine dealer.

AC-SPHINX
Birmingham
ENGLAND

AC Spark Plug Company
FLINT, *Michigan*

AC-TITAN
Clichy (Seine)
FRANCE

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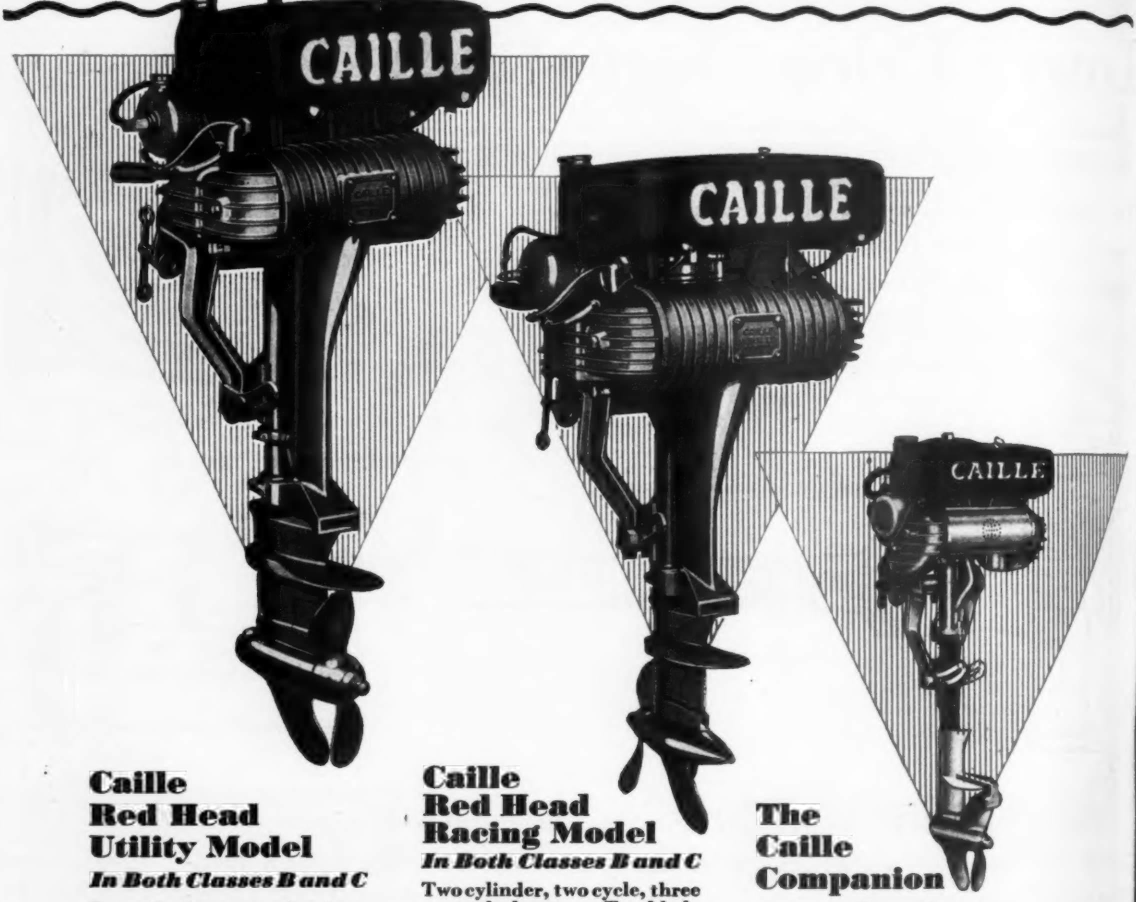
AC INSTRUMENT PANELS AC TACHOMETERS AC THERMO GAUGES AC AMMETERS
AC OIL PRESSURE GAUGES AC AIR PRESSURE GAUGES AC OIL FILTERS

THE GREATEST IMPROVEMENT



Caille Red Head Utility Model

In Both Classes B and C

Two cylinder, two cycle, three port valveless type. Two blade propeller gives high speed, trolling speed, neutral and reverse. Centrifugal pump cools motor at all times. Electric starter and generator at slight additional cost.

Caille Red Head Racing Model

In Both Classes B and C

Two cylinder, two cycle, three port valveless type. Two blade special racing wheel mounted in front of gear housing, eliminating cavitation. Hi-Speed stream line. Centrifugal pump for perfect cooling. Center of gravity lowered for fast maneuvering. For use on racing hulls only.

The Caille Companion

Class A

Light Weight; Quick Take-Apart; Easily Portable.

Two cylinder, two cycle, three port valveless type. A small, powerful, all-purpose motor for fishermen, hunters, tourists and cottage owners.

The NEW CAILLE
Two Speeds Forward

PERFORMANCE IN 20 YEARS . . .

MULTI-FLEXIBLE CONTROL

Caille now offers the ultimate in outboard power in the new Red Head models for 1930—the motors that make any outboard runabout the equal of the most expensive motorboats afloat when it comes to simplicity of control and ease of handling. Never before has such a simple, practical system for convenient and safe control been offered. Nor has it previously been possible to run idle in neutral speed, or get both trolling and fast speed forward. You will find all these exclusive features in the Caille Red Heads, and in addition, complete electric starter and generator units as optional equipment.

Go ahead . . . stop . . . back up . . . or idle . . . it's all the same to the New Caille Red Heads

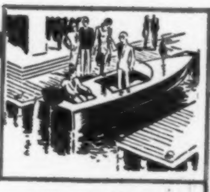
Back out of your slip, turn at slow or trolling speed, leap into a fast pace with the simple movement of one hand—this is all possible if your boat is powered with a new Caille 1930 Red Head. You can run in neutral (boat stands still with motor running) while passengers are boarding, or come to a 4-wheel brake stop by shifting from high to reverse, something outboard enthusiasts have always wanted, but never had until Caille brought about these advanced improvements, giving for the first time perfect control to outboard powered boats.

Other New Caille Red Head Features in Brief

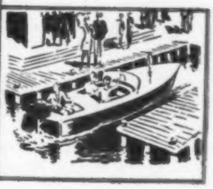
1. ***New design power head.*** More power, speed and economy of operation.
2. ***Full ball bearing construction.*** Smooth running. Saves oil.
3. ***Water-muffled exhaust.*** Quieter operation. No fumes.
4. ***Centrifugal cooling.*** Automatic in action. Operates even when idling.
5. ***Balanced power.*** Ground and lapped cylinders. Machined ports and combustion chambers. Matched pistons and connecting rods. Eliminates vibration.
6. ***Electric starters and generators.*** Available at slight extra charge.

Full information on these marvelous motors will be sent you on request. Use the coupon below at once. You will receive descriptive literature, and the name of your nearest Caille Red Head dealer.

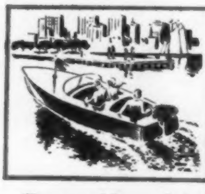
CAILLE MOTOR COMPANY, 6213 SECOND BLVD., DETROIT, MICH.



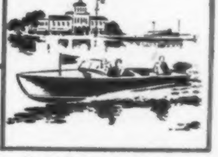
Caille Red Head motors can be started in neutral; your boat remains stationary at the dock until you are ready to go—either forward or backward. No paddling for position when starting or landing, if your motor is a Caille Red Head.



Back your boat out of the slip in perfect comfort when it's Caille Red Head equipped. No awkward maneuvering—no stern wave to wash over the transom and flood your boat with water.



Slow speed forward at the turn of a hand. Your craft glides away with the ease of an expensive runabout. This speed is ideal for those to whom trolling is the greatest of sports.



Leap from neutral to fast speed by a simple movement of the control lever. Your craft responds instantly, and you're off at enjoyable flashing speed.

Caille Red Heads offer exceptional sales opportunities to distributors and dealers. Some territory available. Wire or mail coupon for complete information. See us at the New York Motor Boat Show, Booth 416.

RED HEADS

Neutral and Slow Reverse

BOATS WITH ENGINES TO MATCH

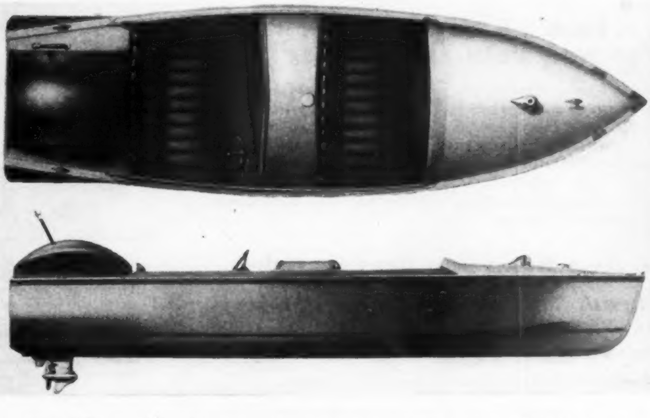
An Entirely New Series of Six Matched Units by Johnson Motor Company Includes Utility, Family, and Service Craft

FOR the new year 1930, the Johnson Motor Company have solved the problem of matching a boat and its outboard engine. A perfect match of a boat and an engine is important for the achievement of the best results. The announcement of an entirely new series of six boats especially designed for the power plant most suited to it will be received with pleasure by outboard owners.

The line itself consists of six matched units of Johnson utility, service and family boats in beautiful color combinations and—powered with Sea Horse motors—capable of speeds from 14 to 27 miles per hour. The two leaders of the line are the Aquaflyer 20-foot runabout and the Aquaflyer De Luxe Runabout—both unquestionably the last word in outboard motor and boat design.

These two craft may be powered with either the famous Sea Horses 16, 24 and 32, all two-cycle motors and can attain a speed which rivals that of larger and more expensive boats.

Another advantage these craft have is the added efficiency of propeller-power steering over rudder steering. Propeller-power is more instantaneous than rudder steering and provides a measure of safety in rough water and high winds. In addition to this, the Johnson Matched Unit because of tilting propeller action, can navigate over shoals and in shallow waters. In rough water, the owner of a Johnson craft can simply tilt up his motor, replace the broken shear pin or propeller and he is ready to go again.



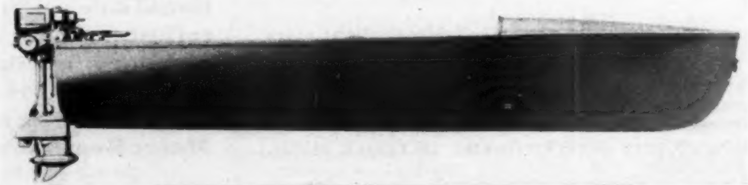
The DeLuxe Aquaflyer runabout is a smart 18-footer suitable for Sea Horse 16 or 32 which are entirely enclosed

The first of the revolutionary type boats is the 20-foot Aquaflyer Runabout of Johnson design and the famous Prestite Construction. This boat is powered with the Sea Horse 16, 24, or 32, and is a cross between a bilge type boat and a hydroplane. In designing this boat, Johnson marine architects have combined the best qualities of both designs and have produced a boat that has the speed of the hydroplane and the comfort and ease of riding of the bilge type boat. Water slap, so common and uncomfortable in hydroplanes, has been eliminated, and the craft banks, turns and speeds with perfect ease and safety.

This craft is finished in a cream white, natural mahogany hull, green bottom and black water line. The interior is of natural wood finished, with deep, French pleated, red, Spanish leather upholstery. This boat, powered with a Sea Horse 32, will travel over 20 miles per hour.

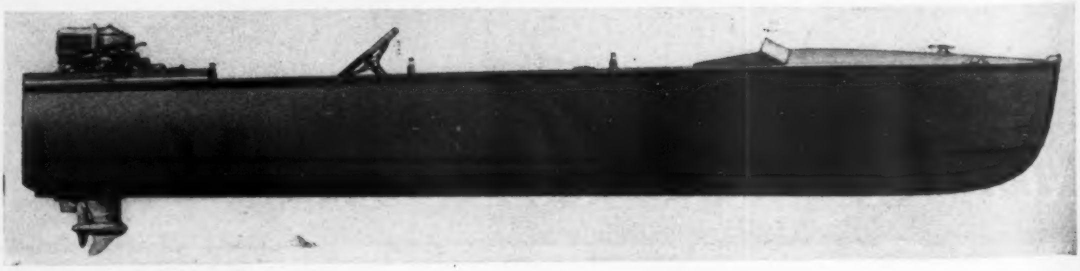
The second boat in the line is the De Luxe Aquaflyer Runabout, a V-bottom craft 18 ft. long with a 60-in. beam. Motor is mounted in stern and completely enclosed with hatch cover. Of Sealite Con-

(*Continued on page* 458)

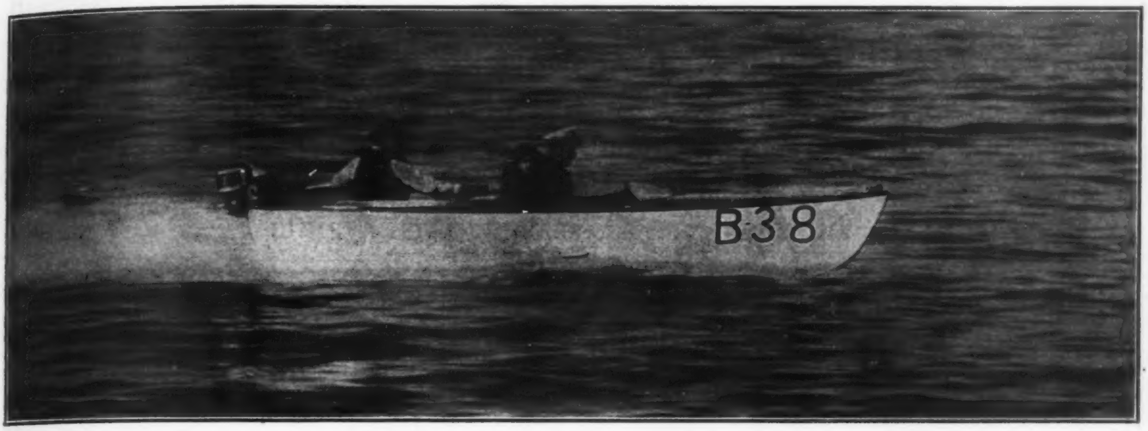


Jtility A is a ound bilge type 14-feet long for use with Sea Horse engines up to 12 h.p.

The Service runabout is 18 feet long and of the Vee bottom type for use with Sea Horse 16 and 32



THE CROUCH HARPOON



Note the clean wake and absence of wetting spray at over 30 miles per hour

USEFULNESS

The Harpoon Runabout is particularly appreciated at shore resorts on account of its absolute merit. Note the following facts:

It is exceptionally dry.
It is unusually able.
It is constructed for salt water use.
It is a beautiful boat-building job.
It is safe—no pounding in a head sea or diving in a following one.
It is, withal, extremely fast—the fastest displacement runabout of its size and weight produced.
It is another product of that master designer, George F. Crouch, N. A.

SPECIFICATIONS

16 feet long by 4′ 6″ beam.

FRAMES—of white oak—steam bent to form that they may not split or crack when a little sea is running.

PLANKING—of cedar, light but tough, that it may be thick enough to give real service without excessive weight.

DECKS, Seats, Transom and Trim—Finished in mahogany for beauty's sake.

FASTENINGS—copper rivets and brass screws—better in fresh water and indispensable in salt water.

Runabout	**225 lbs. . . .**	**Price $330.00**
Sportsman's Open Boat . .	**190 lbs. . . .**	**Price $235.00**

F. O. B., Deep River, Conn.

Offered for immediate delivery
by both

THE DESIGNERS *and* *THE BUILDERS*

GEORGE F. CROUCH, INC.
MIDDLETOWN, CONN.

PRATT, READ & CO.
DEEP RIVER, CONN.

Interesting models will be exhibited at the Motor Boat Show, Jan. 17-25th, Fourth Floor, Space 416, Grand Central Palace, New York, N. Y.

No cheaper substitutes can take the place of boat woods

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Published by

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NEW YORK, N. Y.

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Yachtsman's Guide Supplement, Flag Book	1.00
Price of Guide and Supplement	2.00
The Cruise of the Hippocampus, by Alfred F. Loomis	2.00
Ship Model Making, by Capt. E. Armitage McCann	2.50

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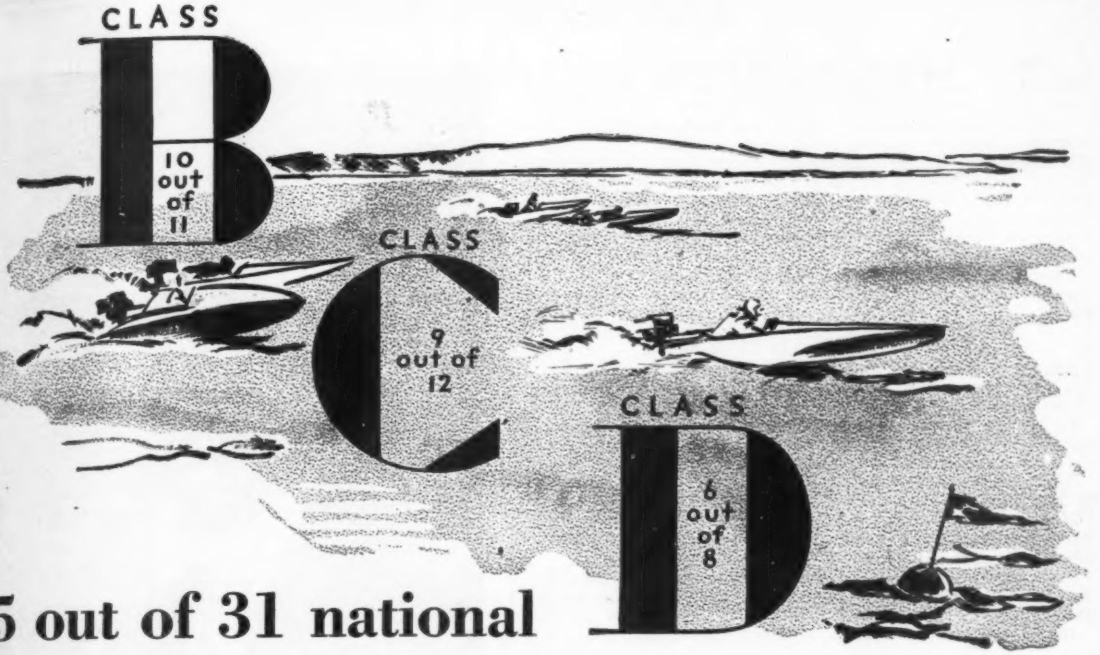

25 out of 31 national outboard records made with the New Mobiloil

Class B, Class C, Class D — in every division, from coast to coast, record-breaking drivers rely on the New Mobiloil.

The bare listing of New Mobiloil records in three Outboard Classes proves more than a thousand claims about the remarkable performance of this new high-speed engine oil. Look at them:

National Class B Records
Out of 11 — 10 for the New Mobiloil
National Class C Records
Out of 12 — 9 for the New Mobiloil
National Class D Records
Out of 8 — 6 for the New Mobiloil

25 out of 31 National Records! Is it any wonder consistent winners everywhere rely on the New Mobiloil? It helps them *win* races.

Find your engine on the complete Mobiloil Chart at your dealer's. It shows the exact grade specially refined for your particular type of motor.

How is your boat stored this Winter?

Our authoritative treatise on every phase of the care and operation of motor boat engines also includes some valuable pointers on Winter storage. We will gladly send a copy free of charge. Mail the coupon now.

VACUUM OIL COMPANY
Makers of high-quality lubricants for all types of machinery

Make this chart your guide

If your engine is not listed here, write to the Vacuum Oil Company, 61 Broadway, New York. The winter recommendations specified on this Chart should be followed when freezing temperatures below 32° F. are encountered, unless the engine is kept warm while not in operation.

NAMES OF MOTOR BOAT ENGINES	1929 Engine		1928 Engine		1927 Engine		1926 Engine	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Buda	BB	A	BB	A	BB	A	BB	A
Chrysler, Royal AM & AMR	BB	A						
" Imperial AM	BB	A						
" Royal & Imperial, *all other models*	B	A	B	A	B	A		
Elto, Outboard	A	A	A	A	A	A	A	A
Evinrude, Outboard	A	A	A	A	A	A	A	A
Gray, 4-30, H-50, 6-72, H-75, 8-100 & 6-60	BB	A	BB	A	BB	A	BB	A
" A-6 & Z-6					BB	Arc.	BB	Arc.
" 0, 1-5, 2-10 & 2-cycle	A	A	A	A	A	A	A	A
" *All other models*	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Hall Scott, A. C. F.	B	A	B	A	B	A	B	A
Johnson & Johnson Seahorse, Outboard	A	A	A	A	A	A	A	A
Kermath, 85, 125, 150	B	A	B	A	B	A	B	A
" 3, 4-5, 6-8, 12, 16 & 20	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" 200	D	A						
" *All other models*	BB	A	BB	A	BB	A	BB	A
Lathrop, 100 & Mystic	BB	A	BB	A	BB	A	BB	A
" *All other models*	A	A	A	A	A	A	A	A
Lockwood Ash, LA, 41					A	Arc.	A	Arc.
" *All other outboards*					A	A	A	A
Lockwood, 41	A	Arc.	A	Arc.				
" *All other outboards*	A	A	A	A				
Palmer, 2-cycle	A	A	A	A	A	A	A	A
" NR, NK, NL, F, ZR, PNR	B	A	B	A	B	A	B	A
" *All other models*	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Red Wing Thorobred, A, D, K, KK	A	Arc.	A	Arc.	A	Arc.	A	Arc.
Red Wing Thorobred, Big Chief SP, Six, Special Six, Four, BB SP Six H. S. & BB Six H. S.	B	A	B	A	B	A	B	A
Red Wing Thorobred, *all other models*	BB	A	BB	A	BB	A	BB	A
Scripps, F6 Jr. Gold Cup G6, 116, 202, 172, F4, F6, 173, 162, 163	B	A	B	A	B	A		
" *All other models*	BB	A	BB	A	BB	A	BB	A
Standard, N. J.			B	A	B	A	B	A
Stearns Extra Reserve	B	A	B	A	B	A	B	A
Sterling, Neptune	A	Arc.	A	Arc.	A	Arc.	A	Arc.
" Coast Guard	BB	A	BB	A	BB	A	BB	A
" *All other models*	B	A	B	A	B	A	B	A
Universal, Single Cylinder	A	Arc.	A	Arc.				
" Flexifour	BB	A	BB	A	A	Arc.	A	Arc.
" *All other models*	B	A	B	A	B	A	B	A

the New Mobiloil

GARGOYLE

Vacuum Oil Company, Marine Sales Dept. B-2,
61 Broadway, New York City.

Please send me, without obligation, a copy of your booklet, "Correct Lubrication of Motorboat Engines."

Name____________________
Street____________________
City________________State__________

OUTBOARD NOTES

SMOOTH BOTTOMS FOR FAST BOATS

During the season of 1929 Balubricote, the Bottom Coat for Faster Boats, advanced still further in the favor of motor boat owners. At the close of this year no less than seventeen of the American outboard records were held by Balubricoted boats. The fastest mile for an outboard, the fastest time in competition and the fastest record for B or C class outboards were all made by Balubricoted boats. The champions of the B and D classes give great credit to this racing bottom compound, which reduces the water friction to a minimum. Dealers everywhere find an excellent demand for Balubricote and everything points to an exceptionally fine year for both users and dealers of this unique product made by Bahl Chemical Company, Fall River, Mass.

ED. GRADY WITH MULLINS

Edward J. Grady has joined the Mullins Manufacturing Corporation, Salem, Ohio, as manager of field sales for the Boat Division.

To his new position Mr. Grady brings a wealth of experience and wide acquaintance in the outboard industry and a background of yachting experience dating back as far as 1912.

His previous connection, it will be recalled, was with the Johnson Motor Company.

Mr. Grady is a member of the Chicago Yacht Club, RC2, North American Yacht Racing Union, and N. E. Outboard Motor Boat Association.

Discussing his new job, Ed waxed enthusiastic over the eight new Mullins models which comprise the 1930 line to be exhibited at the New York Motor Boat Show.

To Ed, anything but a metal boat is a makeshift.

Ed. Grady, who will take charge of sales for Mullins

A COMPLETE BOOK ON OUTBOARDING

"Outboard Motor Boats and Engines" is the name of a comprehensive volume of about 300 pages, fully illustrated, from the pen of Bradford Burnham, well-known writer and advertising man and a boating enthusiast for the past twenty years. With the tremendous popularity which the outboard of today enjoys, with new thousands turning from the highways to the waterways every month, with the outboard the solution to the vast number of boating enthusiasts whose funds are limited, and to the thrill seeker whose funds may not be limited, this book on the subject is indeed timely.

Mr. Burnham says the book is for boys of from eight to eighty, and for girls, too, who love the water and boats. While it contains much of an elementary nature regarding design and construction of outboard hulls and engine operation, and as such is a valuable guide for the beginner, there is much within its covers that is informative and helpful to the more experienced. What makes the book delightful reading is the author's way of unconsciously imparting to almost every page his own enthusiasm for the sport and love for the water—an enthusiasm which is quite contagious.

Bradford Burnham, who has just completed a new book called "Outboard Motor Boats and Engines"

The contents include twelve designs and building instructions for various types of outboards, reprinted from MoToR BoatinG through the courtesy of the publishers. No one achieves the ultimate in boating enjoyment until he experiences the thrill of launching and trying out a boat made with his own hands. The designs are simple for amateur construction and many a boy and his dad will find zest and comradeship in building one together in cellar or garage, thus making the sport a year round pleasure.

Suggestions as to the proper boat for the individual's own needs, a discussion of the various types of design and of the various types of engines, proper equipment, cruising hints, points to consider in buying a second hand boat, and outboard racing are other subjects covered in this book. The latest racing records and the 1930 racing regulations are given in full.

The author, Rufe Burnham, has been identified with various factors of the marine industry for many years, including an association with two leading marine motor manufacturers, yachting editor of magazines, and has cruised extensively in small boats from Maine to Florida. He is at present treasurer of the advertising agency of Littlehale, Burnham, Fulton, Inc., New York, who specialize in advertising in the marine field. "Outboard Motor Boats and Engines" is published by the Frederick A. Stokes Co., New York.

WHAT TO USE FOR SEAMS

Soon, very soon, it will be time to put the boat into the water again. Last spring many of us in the excitement and pleasure of launching our activities on the water were careless in the neglect of many little things that would have meant much to us in comfort and the sense of security throughout the season. Try to do better this year

The old adage, "A stitch in time saves nine," is most applicable in the world of boats. Most particularly in respect to leaky seams. A leak, no matter how small, is always a nuisance and a cause of annoyance, if not worry. So in order to increase the pleasure of your boating days go over all seams before putting your boat overboard. Remove all the old, dry filler and renew with the best materials obtainable. L. W. Ferdinand & Co., distributors of Jeffery's Marine Glues, Boston, Massachusettes, have a little booklet, "What to use and how to use it," which is yours for the asking.

MoToR BoatinG Books

Published by

MoToR BoatinG

FIFTY-SEVENTH STREET at EIGHTH AVENUE
NEW YORK, N. Y.

Titles of Various Books and Prices

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Volume	II—How to Build Sixteen Ideal Motor Boats, Edited by Chas. F. Chapman	2.00
Volume	IV—Twenty Easy-to-Build Motor Boats, by Wm. J. Deed and others	2.00
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Volume	VII—Build a Boat, by John L. Hacker and Chas. D. Mower	3.00
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Practical Suggestions for Handling, Fitting Out and Caring for the Boat	$1.50

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Foreign Postage: single copies, 50c extra; sets $1.00 extra per set.

ORGANIZING FOR OUTBOARD RACING

(*Continued from page* 398)

board Association, which we'll say includes all local outboard clubs within a radius of twenty-five miles of the lake. The L. R. O. A. would be a district association, in our scheme.

In the meantime a similar procedure has been followed by another group of local outboard clubs in the vicinity of a second lake on Long Island, with another district association as the result. Eventually these several district groups conclude that they will be able to stage bigger and better regattas by combining their forces, so they become united into the Long Island Outboard Association, which is henceforth the parent body for the entire Long Island section.

The region in which Long Island is located has been designated as the Middle Atlantic region and consists of the states of New York, New Jersey and Pennsylvania. The Middle Atlantic Outboard Association is the regional organization for these three states and all the various sectional associations therein come under its jurisdiction.

The Administrative unit which handles the details and superintends all of the work is this regional association. It should furnish all printed forms necessary. It should advise and help sectional and district associations or even individual clubs in every way to make their regattas attractive and successful. It can do this by helping them prepare proper announcements to give complete detailed information and, if necessary, furnish experienced officials, as well as a capable referee to see that everything is done in a shipshape manner satisfactory to all. It should also help secure entries through its membership at large as well as through its publicity department.

The American Power Boat Association should issue sanctions in the various regions only through the regional association which should be held responsible for the fulfillment of all the details which must be absolutely correct before any records can be allowed.

In addition to fully and accurately recording the results of all regattas, a complete record of each driver's activities throughout the season should be kept by the regional secretary. The ordinary 3 by 5 index card will be adequate for this purpose. Each card should carry the driver's name and address, his club or organization, his division and registration number, and it might be a good idea to include his racing number together with the make of his boat and motor. Following this information there should be a complete record of the driver for each sanctioned or approved race in which he starts.

These cards should be kept fully up-to-date at all times. In this way a reliable and instantly available record of each driver will be formed, which will be found of great value not only for publicity purposes but also to settle any arguments or that may arise over the division of a driver, the number of boat, make of motor, etc.

If our scheme is to function smoothly and efficiently, a amount of revenue must be obtained in order that the administrative body which as we have noted is the regional association employ the necessary clerical force to issue bulletins, work publicity, prepare circulars and posters for regattas, etc. order to do this, members at large not belonging to a club, should pay $5.00 per year. Clubs or groups should pay the basis of one dollar ($1.00) a member up to 25 bonafide members and over 25 members a flat fee of $25 per year.

Where there is a recognized association organized to handle the races in a district and they as a section wish to the parent association they should join at the rate of one ($1.00) a member up to 50 members and over 50 members a flat fee of $50.00 per year.

In this case the parent association should give the association every possible assistance and, in the territory in question, refer all inquiries for membership from it to them and them to build up a really strong and capable group.

They should likewise cooperate to the fullest extent in organizing the Annual Sectional Championship Regatta.

To cooperate with this plan the American Power Boat Association, which is distinctly a rule-making body and does not races of any kind, should grant sanctions for an outboard to clubs or sectional associations only through the administrative body we have designated as the Regional Association.

In order that the American Power Boat Association may likewise prosper through this new plan they should charge $100 a sanction and give it only for the National Championship, the eastern, western and central Divisional Championships, the Regional Championships and the Sectional Championships.

In return for this sum, regular A.P.B.A. officials should be present at these particular championship regattas to make certain that all time made is executed under the proper conditions.

The A.P.B.A. might even send an official to the scene of action a day or so ahead of time, to insure everything being in readiness when the event takes place.

In closing let me state that it should be carefully understood that the various suggested membership fees contained herein are merely illustrative. In actual operation they may prove entirely inadequate but it is hoped that the scale suggested may serve as a guide in drawing up a program for either higher or lower fees if such is found to be necessary.

OUTBOARD BOATING IN EUROPE

(*Continued from page* 396)

ments at all, but instead adopted inch measurements and made the cubic capacity ratings as follows:

A class up to 14 cubic ins. pist. disp. This equals 229 c.c.
B " " " 20 " " " " " " 328 c.c.
C " " " 30 " " " " " " 491 c.c.
D " " " 40 " " " " " " 655 c.c.
E " " " 50 " " " " " " 819 c.c.
F " " " 60 " " " " " " 983 c.c.
G " " " 80 " " " " " " 1311 c.c.
H 80 cubic ins. and over pist. disp. This equals 1311 c.c. & over.

There is quite a difference between the cubic capacity of the American and European manufactured motors, and for the purpose of comparison I have tabulated the following list which shows the advantage in cubic capacity which the European manufacturer has over the American manufacturer when racing in Europe or other parts of the world underr I.M.Y.U. rules:

Class	*American Cubic Capacity Limit*	*I. M. Y. U. Cubic Capacity Limit*	*Advantage in Cubic Capacity*
A	229 c.c.	250 c.c.	21 c.c.
B	328 c.c.	350 c.c.	22 c.c.
C	491 c.c.	500 c.c.	9 c.c.
D	655 c.c.	750 c.c.	95 c.c.

Now, it was hoped this year that an agreement would have been reached at Brussels, so that the cubic capacity of the American Outboards and the European Outboards would be the same. I deeply regret to learn that the situation remains exactly the same as it has done for the past four years, in other words the whole of the countries of the world voted to continue the cubic capacity as agreed to by all delegates (including Mr. Paul Bernard, when acting on behalf of America four years ago) that A, B, C, and D classes should be 250, 500 and 750 c.c. respectively.

Various countries who are not at present members of the I.M.Y.U., are now endeavoring to join as soon as Outboard Motor Boat racing has become prominent or popular in their countries. As soon as a country joins the I.M.Y.U, then the clubs have to race under the I.M.Y.U. rules, and the result is that the European metric sizes are adopted for racing. Accordingly Outboards manufactured in Europe have an advantage over those manufactured in America, and it may interest your readers to know that the fastest B class Outboard Motor which I have tested is being manufactured in Sweden, while I understand next Spring attacks are to be made upon the world's records by a British A class motor and upon the C class records by a British built C class motor. Whether the British A and C class motors with their advantage in cubic capacity will be able to beat the American motors remains to be seen, but the fact remains that it is in my estimation altogether wrong that these differences in cubic capacity should exist.

Now, American manufacturers have two alternatives:

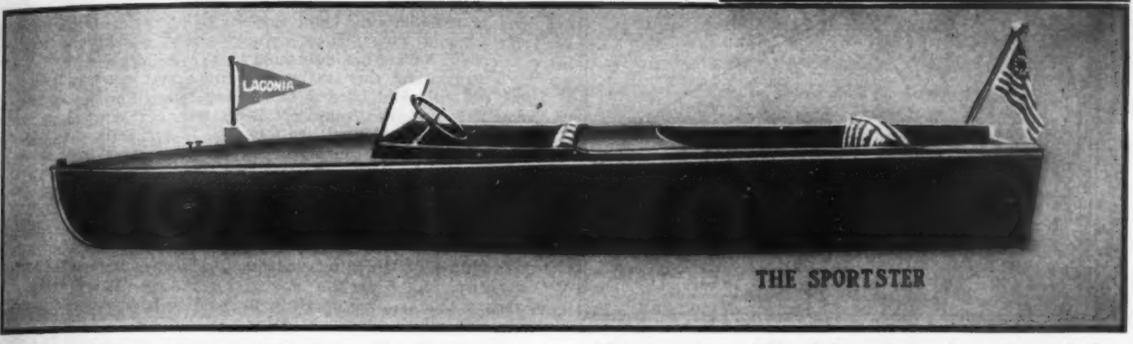
1. It is universally agreed that America manufactures over 90 per cent of the world's racing Outboard Motors. Very few racing motors are manufactured in Europe. It would cost the American manufacturers very heavily to change over production to the equivalent of the European sizes, and it would in my estimation be much cheaper to consider contributing a sum towards the cost of the European manufacturers changing over. The point that influences me in this suggestion is that American manufacturers today are making money out of the Outboard Motor business, whereas the European manufacturers are not making money, and

(*Continued on page* 452)

Once in a LIFETIME

WAS $369

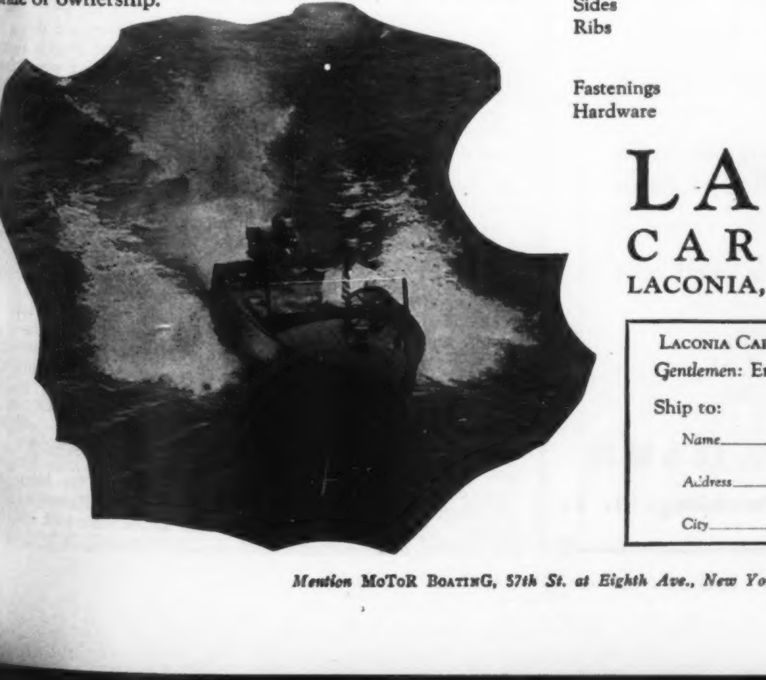
NOW $200



Through the liquidation of the Boat Department of the Laconia Car Co., you may now buy a 16′ Standard SportSter, fully equipped, for $200 f.o.b. Laconia, N.H. Regular retail price was $369.

These boats are smart in appearance, are manufactured to the highest standards, and have been subjected to rigid inspection. They are real runabouts that you will be proud to own. They are built to give years of service, and can be used with any outboard motor of Classes B, C, D, and E, developing speeds up to approximately forty miles per hour. They can be driven from either the forward or after cockpit. Cockpits have comfortable upholstered cross seats. Nestled below windshield is motor car type steering wheel.

These boats are equipped with deck hardware, bow lights, stern flagpole and light, windshield, steering wheel and life preserver cushions. To those people of particular discrimination, they have every refinement which contributes to perfect enjoyment of water motoring and pride of ownership.



There are just 170 of these boats for sale, and they will go to the first who clip this coupon and attach their check.

UNEQUIPPED

We have a few of these boats equipped with only windshield and life preserver cushions for $150 f.o.b. Laconia, N. H.

SPECIFICATIONS

	SportSter
Length over all	15′ 11″
Beam over all	52″
Weight complete (*without motor*)	350 lbs.
Weight, shipping, crated	750 lbs.
Planking and decking	Philippine Wood (Individual planks)
Bottoms	Double planked, with cloth set in white lead between layers for watertightness, painted with anti-fouling bottom paint. Additional stringers besides keel and chines to provide required bottom strength.
Sides	Batten seam construction.
Ribs	Assembled with brass bolts, nuts and washers. Designed for maximum strength.
Fastenings	Copper or brass throughout.
Hardware	White nickel brass.

LACONIA
CAR COMPANY
LACONIA, NEW HAMPSHIRE, U.S.A.

Laconia Car Company, Laconia, N. H.

Gentlemen: Enclosed find check for ☐ SportSter $200
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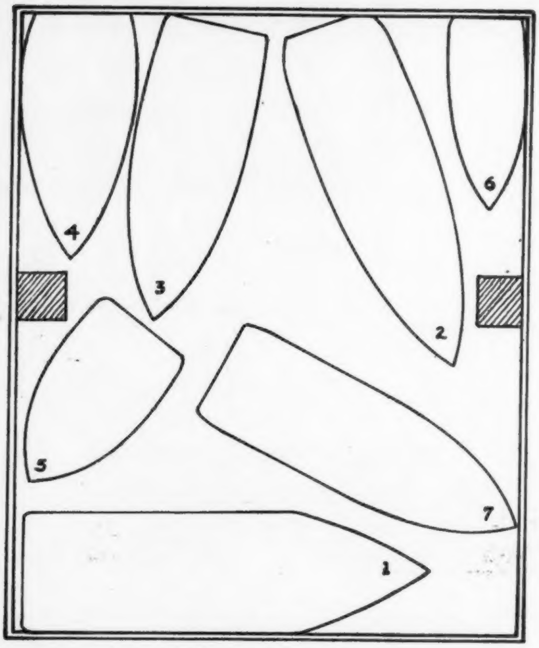

Space No. 414

Legend

1. A 17' Runabout for Comfort and Service
2. A 15' Knockabout of Unusual Capacity
3. A Speedy 13' Knockabout for General Use
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We can help you find the small boat best suited
to
YOUR PARTICULAR
REQUIREMENTS

BRUNO BECKHARD
Flushing Bridge Flushing, N. Y.

OUTBOARD BOATING IN EUROPE

(*Continued from page* 450)

therefore ill-afford to make this change over, and I think it will be agreed that it is cheaper for the American manufacturer to help the European manufacturer—and after all there are only about a dozen Outboard factories in Europe all manufacturing relatively small quantities—rather than change over production in America.

2. The other alternative is that the American manufacturer should produce a special model for export, making the cubic capacity up to the European metric limits agreed to by the I. M. Y. U. The great danger of course is that these export models may wander back to the U. S. A. This will not matter in the International events, as the cubic capacity is then measured, but it would matter in those smaller racing events where the cubic capacity of all motors is not measured after a race. These special oversize cylinders, however, could have a distinguishing mark cast on them.

To my mind this is the most important question today connected with Outboard Motor Boat racing in the majority of countries outside America. I do most sincerely hope that a satisfactory solution will be found, so that America and European countries will be soon producing the same cubic capacity motors to race in the various classes.

Up to the present America has always been able to hold her own in Europe in Outboard racing in spite of this handicap in cubic capacity, but I surmise, however, that this situation will change in the near future, and America will not be able to allow her Outboards to suffer under a handicap in the matter of cubic capacity. As American manufacturers know, it is winning races abroad that has helped them to build up that wonderful export business which they now enjoy.

My friends and I, who have been doing our utmost to increase the popularity of Outboard Motor Boating, have, however, experienced a great deal of difficulty, not only in our relations with the various authorities controlling the waterways of Europe, but also in connection with the attitude of the general public. Srong objection has been made to the noise created by the older types of Outboard Motors.

This season, however, there has been a great deal of improvement in this respect. I am glad to be able to state that I have been instrumental in giving demonstrations to some very influential waterway authorities in Europe, in order to prove to them that the modern underwater exhaust, which is now being fitted to the leading makes of Outboard Motors, makes them reasonably quiet, so that they will not annoy others.

I believe that, in view of the intensive efforts being made by America and other Outboard Motor manufacturers, the time is not far distant when we shall have Outboard Motors just as quiet as the average inboard motor, and when we reach this acme of perfection I am confident that there will be an enormous interest taken in Outboard Motors by the general public in the leading countries of Europe.

I recollect a rather amusing incident which occurred to a prominent Outboard sportsman when experimenting with one of the leading four cylinder Outboard motors. He was testing this on the River Thames near where the Houses of Parliament are situated, just on the water's edge.

With this Hi-Speed hydroplane he had gone up and down the river over a measured distance, when he detected frantic signals from some of his confrères who were on the landing stage about a quarter of a mile away. On his arrival back at the landing stage, he was requested to desist immediately from passing up and down in front of the Houses of Parliament, because the noise from the motor was having a muzzling effect upon the speakers in the House, so much so that they could not be heard at all, and a great deal of annoyance was being shown by the Ministers of the Government.

He, of course, desisted, and immediately Question Time came at that Session, one of the members rose and asked the Secretary of the Home Office (who controls such affairs) whether it would not be possible to put a stop to motor boats which were not adequately silenced being used on the River Thames.

The Home Secretary promised to make investigation into the matter, and eventually the sportsman in question convinced the Home Secretary that he was actually carrying out a silence test with an audiometer, with a view to ascertaining the difference in sound between the open exhaust, regular standard muffler, and the underwater exhaust in which he was then interested.

It seems that the public press took the matter up, and proclaimed this Outboard enthusiast as somewhat of a hero! In fact one paper stated that the would be glad to take him into their employment if there was any chance of his being able permanently to gag the members of the British Houses of Parliament. Another paper acclaimed him as the only man who had been able to muzzle Parliament!

(*Continued on page* 458)

Hooton

Announces continuation of the same sturdy models, line for line and piece for piece, as found so satisfactory under every condition of service throughout 1929. Any changes would be a detriment. Two new models are added, to answer new demands. All are to retain the famous HOOTON quality of construction and matchless performance. Whether you buy them for pleasure or handle them for profit, the absolute correctness of HOOTON designs will be your guarantee of complete boating satisfaction.

HERE ARE THE 1930 MODELS:

Model R, 10 ft. Step Racer, Class A	$180.00
Wildcat, 11½ ft. Step Runabout, Any Class	220.00
Wildcat, 11½ ft. Step Racer, Class B & C	260.00
Safety-Plane, 13½ ft. Step Runabout, Any Class	280.00
Safety-Plane, 13½ ft. Step Racer, Class D & E	320.00
Vee-Plane, 15 ft. Vee Runabout, Any Class	380.00
Resorter, 15 ft. Round Utility, Any Class	265.00

There is so much that is different about these hulls of quality, you must send at once for our new 16 page booklet.

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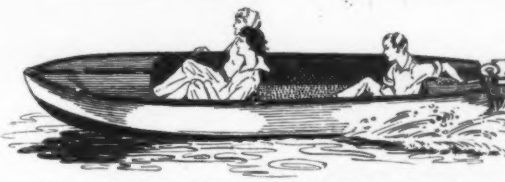
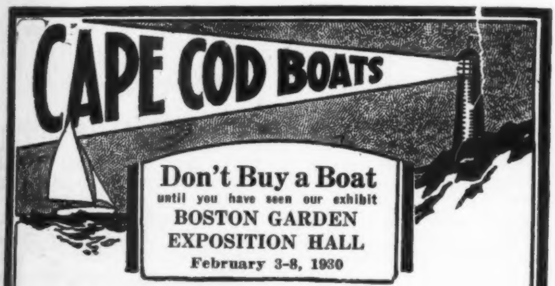
505 Grandville Ave., Grand Rapids, Michigan

THE DECKED WILDCAT FOR CLASSES B AND C



THE NEW RESORTER—USEFUL, BEAUTIFUL, FAST



CAPE COD BOATS

Don't Buy a Boat
until you have seen our exhibit
BOSTON GARDEN
EXPOSITION HALL
February 3-8, 1930

- 18′ Cape Cod Baby Knockabout
- 15′ Junior Sailboat
- 14′ Decked Sailing Skiff
- 20′ Runabout, 4-cycle, 4-cylinder Niagara Motor
- NEW Family Runabout with Van Blerck Junior Motor
- NEW 16′ Sea-going Fishing Boat with Van Blerck Junior
- Cape Cod Row Boats
- Swimming Floats and Diving Boards
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Cape Cod Ship Building Corporation
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Showroom, Main Office and Works: Wareham, Mass.
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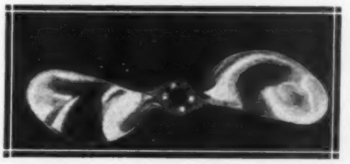

DEALERS!

Read this Telegram—

St. Petersburg, Fla. Dec. 15, 1929
STANNUS PROPELLER CORP.
4091 BEAUFAIT ST., DETROIT, MICH.

"I WON THREE HEATS OF B CLASS RACE HERE TODAY ALSO FIRST PLACE IN FREE-FOR-ALL USING A JOHNSON SIXTEEN EQUIPPED WITH YOUR PROPELLER AGAINST SUCH DRIVERS AS FRAZIER, JACK KERR AND OTHERS, AS NEAR AS I CAN FIGURE YOUR WHEEL INCREASED MY EFFICIENCY TWENTY PER CENT" EARL GRESH

Write for Style and Price List

Your customers want "the propeller with the wins." We have just prepared a folder on our line of outboard racing and service propellers. It will be sent free on request. Write for it now.

STANNUS PROPELLER FOR SPEED CORPORATION

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THE NEW CRANDALL CRAFT

15½-Foot Ocean Going Outboard Runabout

Turns in its own length with amazing suddenness at full speed.

Its high freeboard not only insures safety, but means a dry boat, even in the roughest water. This 15½-foot runabout has been given long and severe testing in very rough water on the ocean. Every attempt to upset the boat has failed. Its shallow draft, its unusual design, its beauty of line, its perfect balance with outboard motors, and its general utility promise to make it a runabout most popular for 1930.

Price $585

For complete details write for the January issue of the Crandall Craft Bulletin

A LUXURIOUS double cockpit sport runabout which rides the roughest water with speed and comfort. Completely equipped with lights, box cushions, large steering wheel, Vee windshield, and lifting rings. All mahogany, with cutwater fittings and trim of nickel silver.

CRANDALL BOAT COMPANY

NEWPORT BEACH, CALIFORNIA

***Eastern Plant:* Phelps, Wis.**

FOUR POPULAR MOTORS

(*Continued from page* 434)

The automatic lubrication system introduced by Lockwood on the 1929 Chief, assuring constant lubrication of the main bearings and connecting rods, is an exclusive Lockwood feature. The Lockwood system of automatic lubrication, through holes drilled through the crankshaft and extending to the connecting rods, gathers the oil deposited in the bottom of the crank case, carries it through the lower main bearing, then dividing it, passes a portion through the upper main bearing, thence through the crank shaft to the connecting rods and crank pin bearings. Thus all moving parts are adequately and constantly bathed in lubricant. The gasoline gauge located on the tank has been found to be a great convenience by hundreds of Lockwood users, and is retained on the 1930 Chiefs.

The Chief's weight of seventy pounds and its cubic inch displacement of 19.92 inches, combine light weight in a motor of ample power for the fast hydroplane, the family boat, the light runabout, or the speedy fishing outfit. While light weight has been achieved, no sacrifice has been made to durability, and only the highest grade materials combined with skilled workmanship are found in the Chief of 1930.

Lockwood Ace, winner of the National Class A Championship at Peoria, Illinois, will be the popular choice for the smaller boat or the Class A racing enthusiast. None of the many well known Lockwood features as formerly developed have been discontinued and the new feature of underwater exhaust silencing has been added to this already remarkable motor.

The underwater exhaust silencer designed for the 1930 Ace embodies a startling new feature—an automatic back-pressure cut-out. Heretofore, back-pressure, due to the gases filling the exhaust funnel of the silencer, has been relieved by a hand-operated cut-out. The new Ace cut-out is entirely automatic, requiring no attention and assuring instantaneous starting. It consists of an auxiliary tube placed in the down-spout of the underwater silencer, and connected by a water passage originating in an opening in the front side of the anti-cavitation plate. When the motor and boat are not in motion, gases are deflected through this auxiliary tube above water. When the motor has been started, the forward motion of the boat forces a stream of water through the opening in the anti-cavitation plate, sealing the auxiliary tube and expelling gases under water. Even at this point, gases are not discharged into the water but rather sucked from the underwater exhaust through a larger-than-the-ordinary exhaust outlet, causing minimum water disturbance, and permitting the full power of the propeller to be transmitted into undisturbed water.

Drag and water resistance have been reduced to a minimum, in the efficiently streamlined gear housing of the 1930 Ace. The Lockwood suction cooling system assures a constant flow of water for maintaining proper motor temperature with no moving parts to wear. The Lockwood automobile float-feed type carbureter, simplified by a single lever controlling both choke and throttle is also retained in the new model. Oversize bearings of hard phosphor bronze give extra long life to all bearing surfaces.

The new Ace, weighing but 52 pounds, embodies light weight yet without sacrifice to strength and staunch durability. Its cubic inch displacement of 13.85 inches, with a bore of 2.1 inches and stroke of 2 inches, gives ample horse power rating for driving the ordinary sized boat zipping through the water at speeds as fast as nearly anyone will want to go. Ace also tilts automatically, preventing possible damage to the motor due to underwater obstruction, a feature likewise appreciated when beaching the boat. The Lockwood Pilot plays its part on Ace, too, as an indispensable feature of this motor. The principle of the Pilot is simple, yet it is amazingly effective and positively dependable. A friction clamp around the drive shaft casing floats between two short cushion springs. When the motor is turned to steer, the clamp sticks. Owing to the floating construction, a very slight clamping action is sufficient to keep the motor from turning itself, but the slight friction is hardly noticeable in steering. The Pilot is a safety device of paramount importance, and considered indispensable by those who have experienced its simple and automatic operation. With the Pilot in control of the boat, you can let go the steering handle, depending on the Pilot to hold a true course

GREENWICH YACHT CLUB FORMED

The Greenwich Yacht Club, Inc., has been formed at Greenwich, Conn., to proceed immediately with construction of a boat basin which will accommodate twenty to thirty craft. The club will be established in the former quarters of the Indian Harbor Yacht Club.

BOAT OWNERS
SAIL and POWER BOAT OWNERS
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How many times has the thought entered your mind—"if the following troubles should happen, how would I get ashore?"

Motor Trouble—Empty Fuel Tank
Dead Ignition—Dead Calm

A SAVAGE UNIVERSAL BRACKET
(Patented)
and an outboard motor will do the trick!

Thousands now in use!

Write for circular.

SAVAGE BOAT CO., Ltd.
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"Best for Boats"

Used in many Show Boats, for planking, decking or joiner work, including:

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We can furnish YOUR BUILDER, the same high quality CLEAR Philippine INDOAKO Wood, from over 4,000,000 ft. now on our yards here.

No order too small... none too large.

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Booths 87 and 88, Third Floor,
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Ready for Emergencies

Be prepared—escape alive and well!

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you can't sink

You can't sink if you are equipped with

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life saving garments, cushions or belts

Send for catalog showing complete line of life-saving equipment and prices.

4 times more buoyant than cork and 10 times more comfortable!

Exhibited by several dealers at New York Show

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Complete catalog free

KENNEBEC
DE LUXE
RUNABOUT

$415.
F. O. B.
Waterville

A Superior Outboard Motorboat
Handsome, Full Powered
Staunchly Built

A superb edition of the popular runabout type of outboard motor craft. Exceptionally seaworthy with sharp nose, full shoulders, and wide bearing at the stern. Its sharp V forward cuts the water readily, assuring comfortable riding and freedom from slap even in rough going.

Decks, rails, seats and planking of solid mahogany. Full equipment and **de luxe** accessories. Auto type steerer, windshield, cork bumpers, lights, etc.

This is a high-class boat in every way with plenty of speed and power.

KENNEBEC STANDARD RUNABOUT

Same as the De Luxe Model except fewer accessories, price $365, f. o. b. Waterville.

KENNEBEC SPECIAL RUNABOUT

Same as the Standard Model except finish in imitation mahogany. Ideal for everyday hard usage, price $309, f. o. b., Waterville.

OTHER KENNEBEC BOATS

JOY BOY III, popular canvas-covered type, invisible sponsons, price $145, f. o. b., Waterville.

PRIZE BABY, medium priced staunch boat for general use, price $158 f. o. b., Waterville.

PLEASURE CRAFT, new low-priced boat of runabout type, price $155 f. o. b., Waterville.

COMET, a baby runabout of 4-passenger capacity, price $289, f. o. b., Waterville.

1930
KENNEBEC
SPEEDBOATS
CANOES

Send for fully illustrated catalog of boats, canoes, paddles, equipment, etc.

The KENNEBEC CANOE CO.
Dept. 9 **Waterville, Maine**

THE NEWEST SEA HORSES

(*Continued from page* 407)

at high speeds and open at low speeds.

Johnson has also incorporated the rotary valve, which evenly distributes gas charges to cylinders and permits greater speed, in the new 4 and 12 by casting it integrally with the crankshaft. In the 16 and 32 this valve is geared to the shaft and turns at crankshaft speed, thus permitting full and complete gas charges feeding into the crankcase, even at high engine speeds.

In the Sea Horses 4 and 12 (alternate firing motors), a hotter spark is delivered to the cylinders because of the new design Johnson quick action magneto which has double breaker and coils providing two impulses each revolution.

Beside these improvements the Sea Horses also have the famous release charger for easy, effortless starting; the only water cooled underwater exhaust; a pressure vacuum cooling system which has no pump, no moving parts and is positive in its action; detachable aluminum cylinder heads (on the Sea Horses 16 and 32); offset cylinders and straight connecting rods; improved automobile type carbureter and many other noteworthy changes.

The Sea Horse line for 1930 consists of seven models, one for every use and purpose, from the Sea Horse Single to the Sea Horse 32.

The Sea Horse Single is a three port type motor, weighing only 27 pounds, and the world's lightest outboard motor. It is designed primarily for rowboats and canoes and has the advantages of full pivot steering and—because of its extreme light weight—easy portability.

The Sea Horse 3 is a Class A twin cylinder motor and the lightest weight twin in the world (38 pounds). It is an ideal motor for use with small craft in fishing, hunting and touring where portages may be encountered. It has the advantage of full pivot steering and also is equipped with the patented Johnson pressure vacuum cooling system.

The Sea Horse 4, another Class A motor, is the new type alternate firing twin cylinder motor, which creates a smoothness of power flow and minimum of vibration not to be found in any other motor with the exception of the Sea Horse 12. Simple in design, with all parts enclosed, it possesses a streamline beauty, strength and compactness never seen before in any outboard motor.

The Sea Horse 10 is a Class B twin cylinder motor, designed for pleasure boats of medium size. It has ample power for racing speed and for auxiliary and commercial use. Possesses release charger for quick, easy starting, pressure vacuum cooling system and may be had with underwater exhaust.

The Sea Horse 12, running mate to the Sea Horse 4, is the other radically new alternate firing twin cylinder in the Sea Horse line. It is a Class A motor. It possesses both the underwater exhaust and full pivot steering as well as pressure vacuum cooling system.

The Sea Horse 16 is the motor which now holds the fastest speed record ever made by a Class B motor—42.37 miles per hour. It is a twin cylinder motor, rotary valve, two port type, developing sixteen horse-power. It is equipped with release charger, water-cooled underwater exhaust, rotary valve, pressure vacuum cooling system and detachable aluminum cylinder heads.

The Sea Horse 32 is the king of outboards, a four cylinder Class D motor, developing 32 horsepower, it is the world's fastest outboard, having set up an official American record of 48.4 miles per hour. The 32 provides ample power for the largest outboard cruisers, runabouts, commercial craft and for auxiliary power on sailing yachts.

A NEW TWENTY-THREE-FOOTER

A new 23 foot runtbout built by the Atlas Boat Corporation will have unusual speed, which has been obtained by careful hull design around the Universal Straight Eight, 115 h.p. motor. Using a new motor in freezing water under unfavorable conditions, a speed of 37 miles per hour was made and checked.

The 23 foot Atlas and all of the Atlas Models are all mahogany runabouts. The fastenings are of bronze and brass and the fittings are all of chromium plated nickel. The upholstery is deep, comfortable and made of the very best and most serviceable material.

The finish is of natural mahogany and is standard equipment, but there is an option of several different color combinations without additional cost.

In addition to the 23 footer, the Atlas Company will build 19, 26 and 30 foot boats. The 30 footer is built in open runabout, sedan and bridge deck sedan models and is powered with twin motors.

The Atlas Boat Corporation is located at Menominee, Michigan. A large factory has been taken over and equipped for modern boatbuilding and the company is prepared to turn out boats on a production basis.

PNUMATICRAFT

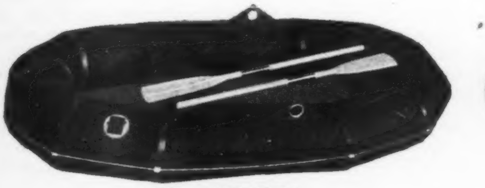
Reg. U. S. Pat. Office

PORTABLE LIFE BOATS

SAFE — LIGHT — DURABLE

Have no equal as utility craft for yachts and motorboats. Perfectly safe for children. *"Can't Capsize or Sink."* Make most convenient tenders because they can be towed and require minimum space when not in use. Will not scratch or rub paint when alongside; can be easily packed for carrying by hand.

Used by Byrd Antarctic Expedition, Consolidated, Dawn, Elco, Humphreys, Robinson Marine Construction, Fokker Aircraft, Alexander Eaglerock, New York, Rio & Buenos Aires Airline, Pan American Airways and many others.



The "PILOT"
Length 7'2" o.a., beam 40" weight 15 lbs. double air chambers of 12" diameter.

The "SKIPPER"
Length 10'2" o.a., beam 44" weight 26 lbs. triple air chambers of 14" diameter.

On exhibit at the Motor Boat Show with, ABERCROMBIE & FITCH COMPANY
Booths 15 and 16, Fourth Floor
and at their Headquarters, 45th St. and Madison Avenue, New York City
Write for illustrated folder M.B. 30.

PNEUMATIC BOAT CORPORATION, 122 Branford Place, Newark, N. J., U. S. A.

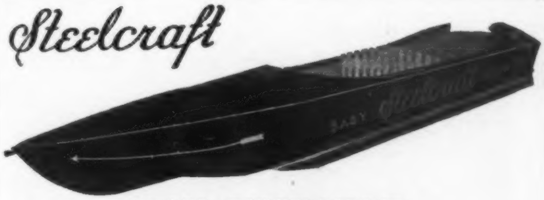
YOU'LL NEVER SAY "SHE NEEDS CAULKING"

EVERY craft can't stand an outboard motor. But this "Old Town" can! She's an outboard boat by build. The stern is made so it won't sag or "give" under the motor's weight. Ribs and keel are extra-rigid. The heavy, non-leak canvas covering never needs caulking. No seams to open up! "Old Towns" are built for long life with few repairs. Swift, light and easy to handle.

Free catalog shows all craft. Paddling, sailing and square-stern canoes. Outboard motor-boats, including big, fast, seaworthy, all-wood family boats; rowboats; dinghies; and speedy step-planes. Write today. Old Town Canoe Co., 182 Middle Street, Old Town, Maine.

"Old Town Boats"

Steelcraft



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NON-CAPSIZABLE
NON-LEAKABLE

SPEED—SAFETY—DURABILITY

AMERICAN STEEL BOAT CORP.
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BARGAIN

STEP-SLED CABIN

SEDAN
$325
F.O.B.
NASHVILLE

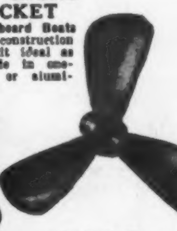
This is a splendid opportunity to get a real bargain. Has been used as demonstrator.

PATE-PARKES MFG. CO.
NASHVILLE, TENN.

COMBINATION POST LIGHT AND FLAG POLE SOCKET

For Class I and Outboard Boats The sturdy one-piece construction of this light makes it ideal as a towing post. Made in one-piece casting; brass or aluminum highly polished.

T. & B. Type



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Racing Propellers for Outboards

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Just Out!

OUTBOARD MOTOR BOATS AND ENGINES

By Bradford Burnham

Every phase of outboard motor boating discussed by an expert and ardent enthusiast of this thrilling sport. Mr. Burnham covers the subject so comprehensively that his book will be valuable to the beginner and the old hand alike in getting the most out of his boat and the sport of outboarding.

Eleven designs and instructions for building various types of outboard boats are included, all of them simple and comparatively easy to construct.

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afe Boats that are FAST!

This Is Show Season

WHETHER or not you have the opportunity to see our display of fast outboards at the New York Show, you may be assured that LYMAN continues to promote the same high standard of performance, design and construction for which our boats are noted.

Our 1930 line embraces models ranging from eight to seventeen feet in length. There are sturdy, reliable speed tenders, general-purpose sea skiffs and runabouts of unrivalled distinction. No matter what your requirements may be, there is a LYMAN to fit your needs.

This is show-season, and when it is over you will find that quality and long experience are the two factors which really count in the manufacture of good boats. Send for our catalog.

LYMAN BOAT WORKS
Ft. of First St. Sandusky, Ohio

We are originators of clinker-built speed tenders and fast outboard motor boats.

OUTBOARD BOATING IN EUROPE

(*Continued from page* 452)

Now, in regard to the construction of Outboard hulls in Europe; practically every country here is now able to turn out its own boats, and of course it is a simple matter to construct an Outboard hull. The main point is to get hold of the correct design.

Designs of good Outboard Hulls are quite easily procurable. At least two well known American Outboard Motor manufacturers broadcast blueprints of hulls. The actual cost of building these in Europe is generally much lower than the cost of building these hulls in America. This is due to the lower wages paid to workmen, and the smaller general overhead cost paid by European builders in the form of rent, advertising, etc. In England too, we are able to sell Outboard hydroplanes at much lower prices than the American mnuufacturers. One boat factory, in which I am interested, at the present time turns out a first class hydroplane built of No. 1 Honduras or Philippine mahogany, the same size planking as the American boats, and in some cases dead copies of the American craft.

If American craft are marketed here, it must not be overlooked that the cost of crating and transport charges from the boat yards down to a seaport, loading on board the steamship, plus insurance, handling this side, etc., comes to rather a high figure. So much so in fact, that eventually the American hull laid down in Europe, costs double the price of the locally made article.

I have often told American hydroplane manufacturers that it is no use their hoping to build up a large export business, because the only trade they do is of a temperoray nature. The features and lines of their can easily be copied on arrival at destination.

BOATS WITH ENGINES TO MATCH

(*Continued from page* 444)

struction entirely copper and brass fastened. Upholstery is of deep, French pleated, green, Spanish leather. The hull will be orange with black water line and green bottom. The interior is leather lined with a linoleum floor. The motor power is either 16 or 32 Aquaflyer motor with electric self-starter. Speed, with Sea Horse 16, 19 m.p.h.; with Sea Horse 32, over 25 m.p.h.

The Service Runabout is also an 18-foot craft with 60-inch beam of the V-bottom type. This is of Sealite Construction with either the Sea Horse 16 or 32 mounted well into the stern. There are three cross seats with lazybacks fitted with three comfortable seat cushions of the Kapoc filled life preserver type. All hardware of solid nickel silver and boat finished in Palmetto Green with bronze bottom and red water line. Johnson green deck and interior of natural wood finish. Speed with Sea Horse 16, 22 m.p.h.

The Utility A Boat is of the round bilge type, 14 feet long, with either the Sea Horse Single, 3, 4, 10 or 12 installed on transom. Entire construction of Sealite with Johnson green hull and a natural wood interior finish. There are three cross seats with a carrying capacity of eight persons. Hull is of Johnson green with a natural wood molding.

ELECTRIC STARTING OUTBOARDS

(*Continued from page* 409)

smooth, vibrationless performance in the motor car. Fold-Light is the first outboard motor employing rubber cushioning to minimize vibration—a startling new development! Because of its rubber cushioning mounted between the inner and outer sleeve, a minimum of vibration is transmitted to the boat, resulting in smooth, vibrationless operation. The rubber cushioning also serves a dual purpose, holding the motor steadily to any course you may choose to follw. An automatic helmsman for your motor—relax, do anything you please, Fold-Light guides itself!

Another feature which sets Fold-Light apart as an out-of-the-ordinary motor is the mounting of the gasoline tank. By placing the tank on the front instead of the rear of the motor, the lower unit is permitted to fold at the exact center of the motor. It is also more accessible to the operator for refilling. Not only that, it protects the operator from touching the flywheel or the spark plugs. A new type throttle control operates both choke and throttle and a 13,000-volt magneto assures a hot spark for easy starting. The motor also tilts automatically when any obstruction is encountered, thereby safeguarding it against underwater obstructions.

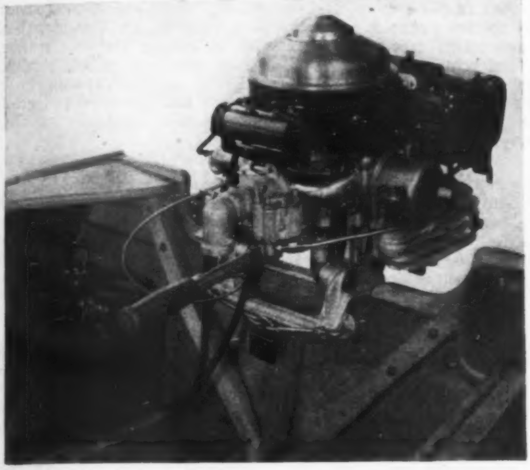
For easy carrying the motor may be folded by merely disengaging the two lock nuts which lock the motor securely into its extended position, and folding the lower unit up to the tip of the motor, where it is held firmly in place by a retaining spring. The steering handle may also be folded down and after locking into position by means of a locking pin, acts as a handle grip, permitting the motor to be easily carried.

OUTBOARDERS HAIL NEW FEATURES

(*Continued from page* 432)

Coupled with the Caille rigid motor construction, with movement of the lower unit only when turning, remarkable ease and safety in steering can be obtained at all times.

The racing motors have a two-inch lower center of gravity for increased speed and safety. Propellers are mounted ahead of the gear housing, as in airplane practice. Thus a good bite into solid water is always assured—there is no cavitation, and resulting propeller slippage, as in the case where the propeller must follow the housing. In Caille Red Head Motors this housing is perfectly stream-lined to cut all resistance to a minimum. A muffler cut-out plate is screwed on the rear of the muffler, which can be taken off for racing. It is an entirely separate unit, and no other parts depend on it for support. Exceptionally quiet operation on all motors is also assured by the extra large mufflers, and in the Class B and C jobs, by the water muffed exhaust. Control from the steering handle is complete in all models, including those equipped with the multiflexible feature.



The new electric starting unit as applied to a Caille Red Head engine and mounted on a boat's stern

The light Class A Companion Model weighs only 42 pounds and can be quickly disassembled for carrying. It is a fast, strong, compact motor that will drive a loaded flat-bottom boat at 7 to 10 m.p.h., and a semi-speed boat at speeds up to 18 m.p.h. This is the sturdiest, most reliable power plant of its kind ever offered to sportsmen who want a motor that they can carry with them anywhere to attach to any boat they may be using. At a slight additional cost, an electric starter and generator can be added to both Class B and C motors—a radical departure in outboard practice which will be hailed with delight by those who want complete luxury in their boats.

ANOTHER YACHT LANDING IN NEW YORK

The East River section of New York is fast becoming an important motor boat center. At 26th Street there is the landing of the New York Yacht Club, where a large fleet of commuting boats converges daily. A similar situation exists at the Campanile Apartment House 52nd Street, which is the New York headquarters of the Montauk Yacht Club and which is equipped with boat landings and club facilities used throughout the season by many of that organization who commute to business daily in their boats. Now there is another, at Gracie Square, between 83rd and 84th Street, on the site formerly occupied by the Italian Hospital in the Carl Schurz Park area. It is in the section where the famous old Gracie house once opened hospitable doors to distinguished guests, among them being Washington Irving and John Jacob Astor.

This huge waterfront cooperative apartment, being built under supervision of Douglas L. Elliman & Co., has features to appeal particularly to the motorized tenants. It has a long motor tunnel with vaulted glass skylight and parking facilities for a large number of automobiles. On the river front it has a long stone landing and a large float for the use of yacht owning tenants and their friends. The lower floors of the river front will be given over to spacious club rooms.

The RAJAH *Company's*

25

years of experience in
designing and manufacturing
ignition specialties is reflected
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—Booth 100—

*You are cordially invited to
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LEADING OUTBOARD RACERS, PROMINENT YACHTSMEN AND MOTOR BOAT OWNERS ENDORSE UTE SUITS

UTE is being handled profitably by leading distributors and dealers throughout the country. Make arrangements NOW for the UTE agency. UTE is backed by national advertising, and closest selling co-operation, which will give you a big spring demand. Send for complete selling details AT ONCE.

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*Dick Upsall, Class D Champ
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BALUBRICOTE

THE BOTTOM COAT for FASTER BOATS

This is what "Dick" says:

". . . regarding "Balubricote" wish to state that I have used your "bottom coat" in many races and have always found it the best thing on the market for this purpose. Also I used it on the bottom of my boat, 'No Foolin,' with which I successfully won the 1929 National Out-Board Championship."
(Signed) DICK UPSALL.

Ask your Dealer for BALUBRICOTE, or Order Direct from Makers—Quart, $2.50

BAHL CHEMICAL CO., 194 Elm St., Fall River, Mass.

YARD AND SHOP

FIRST RACES UNDER 1930 RULES

The boys in California started the new year most auspiciously by an outboard regatta at 11 o'clock in the morning on the first day of 1930. The events were held on Lake Merritt, Oakland, California, on a one-mile course. This lake is in a park in the center of the city of Oakland and attracted an enormous crowd of spectators. Events were arranged for classes B, C and D open to drivers of Division I and II. It must be remembered that the new rules for 1930 place a weight restriction on the boats which requires 150 pounds for boats in classes B and C and 175 pounds in classes D and E. Despite the weight restriction fast time was made in all events.

The Class B event started the program with a five-mile race in two heats. Both were won by Harry Arnold, driving Flying Cloud II, with a Johnson engine, on a Sulmock boat. His best heat was made at the rate of 36.735 m.p.h., which stands as a new record under the 1930 rules. Class C also was scheduled for two five-mile heats, which were easily taken by H. G. Ferguson, driving his famous Blue Streak, an Elsinore boat powered with an Evinrude engine. His best heat was made at the rate of 39.13 miles per hour, a new 1930 record. The Class D event of five miles was won by Francis Wilber, driving his boat Lazy, powered with a Johnson engine. His best time for five miles was 7:33, equivalent to 39.82 m.p.h. Also a 1930 record. Ten-mile races were scheduled for Class B and C, and the winners of the five-mile events, Harry Arnold and H. G. Ferguson, were again successful in securing first place in these. The time in Class B for ten miles was 16.35, with a speed of 36.182, a 1930 record. Events for the ladies were also scheduled and Violet Thomas, driving Buster III, with a Johnson engine, proved to be the winner in Class B.

A CUSTOM BUILT CRUISER

The recent announcement of the reopening of the yard of the Almac Yacht Corporation, at Mystic, Connecticut, was received with favor by yachtsmen. The 50-foot cruisers which they are building have met with such instant appeal that they have sold out the available stocks and are unable to exhibit a boat at the show. These cruisers possess many novel features, most important of which is the individual decorative study which is made by Joseph Urban for each boat. They are to be powered with a pair of 180 h.p. Sterling engines. The structural syecifications will follow the most rigid custom style, so that the boats will be in effect a made to order job.

A COMPASS FOR FAST BOATS

It is only very recently that the practice of providing compasses on fast runabouts has been generally observed. The usual type of compass adaptable to larger craft is not so suitable for this particular work, since the operator is seated and his angle of vision is such as to make a different style of compass desirable. The Pioneer Magnetic Compass has been made particularly to meet this condition. It follows the style of instrument which is almost universally used in aircraft where the conditions are similar. It is of the easy reading type and a most useful and important accessory for the speed boat.

A FAST SEASKIFF CRUISER

The 38-foot seaskiff type cruiser as built by Hubert S. Johnson at Bayhead, N. J., is a most rugged and speedy pleasure craft. The boats are built in both single and double cabin styles with sleeping accommodations for from six to eight persons. Variable speeds are possible with the boats in accordance with the power plant selected. They are built with either a single or twin screw installation and top speeds of 32 miles have been attained with larger engines. The boats are most completely equipped with every useful accessory from boat hook to clock and barometer. Quality has been kept uppermost in the mind of the builder, so that all items installed in the boat are the finest available.

KEEPING OIL COOL

The powerful engines which are now so common in fast cruisers and runabouts and which are run at full throttle for long periods at a time generate terrific heat, which is transmitted to the lubricating oil. The best of oils break down under this service, and a most useful accessory which serves to keep the oil in better condition is the Groco Cooler, designed particularly to absorb the excess heat out of the engine oil. This serves to maintain the viscosity and lubricating properties of the oil for much longer periods. The Gross Mechanical Laboratories report that many of the builders of standardized runabouts such as Chris Craft and others are installing this device in all their boats.

REAL BOAT SERVICE

Persons passing along the Jersey coast on the way to Atlantic City, Philadelphia or New York will be interested in stopping off for a visit at the showrooms of the Toms River Boat Works, located on the new Atlantic City Boulevard. The display room contains over two thousand square feet devoted entirely to the exhibition of their stock fishing cruiser, the Viking, as well as the most popular models of outboard boats and motors and high class runabouts. The showroom faces directly on the water where they maintain three marine railways and fully equipped carpenter shops with facilities equal to any kind of repair or new boat building job.

Storage is provided here for boats up to 75 feet in length not only on shore but also in the open fresh water of the upper part of Toms River, which practically never freezes. Ideal winter storage is thus afforded without hauling out, and owners wishing to look their boats over during the winter will find good hotels, restaurants and theatres in Toms River where they can spend a pleasant week end.

The stock cruiser produced by the Toms River Boat Works is known as the Viking, and is built in 24, 26 and 30-foot models. Of the lap strake dory type, it is a very able sea boat of staunch construction especially well suited to fishing and day cruising.

The boat works dates back a long way, since a boat yard has stood on this site for 40 years. Under its present management, begun five years ago, the organization has expanded and grown to its present large proportions. Charles Thompson of Toms River is the general manager.

RUNABOUT INSTRUMENT BOARDS

The present tendency of all builders is to dress up their boats in every possible way so as to make them appeal to the eye as well as in their performance. Of great help in this endeavor on the part of the builders is the assistance rendered by accessory manufacturers. Instrument panels are universally used, and the Reliance Instruments as made by the Barbour Stockwell Company are doing their part in dressing up many standardized craft. These panels are supplied in a variety of group arrangements which contain a Reliance tachometer, oil pressure gauges, ammeter and distance reading thermometers. For twin screw installations double sets of instruments are mounted in the same panel.

A NEW LITTLE RUNABOUT

Graduating from the little outboard engine runabout, there is now available a 16-foot inboard engine craft which is as smart as the best of them. The Chase-Emerson runabout powered with the little Van Blerck, Jr., engine, is an outgrowth of the demand by the public of something a little more convenient to handle and maintain than the outboard engine job with its big engine. These little boats are built and upholstered in the finest style of the runabout manufacturer. The lines are speedy and permit 25 miles without effort. They are very seaworthy and run along without taking aboard any spray or subjecting the passengers to discomfort.

POPULAR CRUISING CRAFT

The plant of the Whitney Woodcraft Corporation, at East Hartford, Connecticut, is busily engaged in turning out their 35 and 41-foot standardized cruisers. These boats will both be fast for their size and style, obtaining speeds of 20 miles per hour. A single Sterling Engine of 200-horsepower is used to drive the smaller boat, while a pair of Chrysler engines are used in the larger boat. Both hulls are of the Vee bottom type with a beam of 10 feet.

THREE SPEEDY CRUISERS

The Dachel Carter Boat Company, of Benton Harbor, have announced a new series of fast cruising boats which are to be built during 1930. These comprise a 34-foot commuter and a 40-foot cabin express cruiser. Both of these boats have the identical cabin arrangement in the forward cabin and in addition the larger boat has an after cabin which will accommodate two additional guests. The speeds promised for these boats range up to 40 miles per hour, depending on the power plant selected. A still larger 48-foot fast cruiser will also be constructed and the arrangement and speed capacity of this are still somewhat uncertain at this time.

VAN BLERCK CATALOG AVAILABLE

Copies of the newest catalog of the Van Blerck Motor Company descriptive of their Van Blerck Junior Portable Inboard Motor are now available to the public and may be secured by addressing Van Blerck Motors, Inc., Red Bank, N. J.

ATTENTION!

DEPARTMENT STORE BUYERS

Fairchild Boats, Inc. has on hand in excess of one hundred outboard hulls, which are offered for quick sale.

Models include both family runabouts and racing hulls. These boats may be merchandized to your trade at a price close to 50% below the regular market value for boats of a similar type.

This is a splendid opportunity for a special offering to mark the spring opening of your boat department.

Full details available at our New York office during Motor Boat Show. Inquiries may be made either by mail or in person.

FAIRCHILD BOATS
37 West 43rd Street
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SAIL BOATS, DINGHYS, OUTBOARDS, SKIFFS, ETC.

We are builders of a complete line of small boats. Write for catalog. You will find what you want at the right price.

BALTZER BOAT COMPANY, INC.
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LINTHWAITE INBOARDOUTBOARD DRIVE UNITS

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We Specialize in All Types of Aquaplanes

Speed Model Akwa-Skees

AQUAPLANES
Scientifically designed, beautifully balanced, for towing—

SKIBOARDS
(Patents Pending)
The outboard-motor-propelled aquaplane—

AKWA-SKEES
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The sporty self-balancing double aquaplane—

SURF-BOARDS
Standard type and genuine Waikiki Model—

DOLPH
A game played on Akwa-Skees, Skiboards and Aquaplanes

Interesting Proposition for Outboard Boat and Sporting Goods Dealers

Write for details and discounts.

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National Distributors of Water Sports Equipment

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Skiboards make thrilling races.

MORE SPEED

AND A DRY COMFORTABLE BOAT!

Those are the advantages that win enthusiastic favor for the

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from boat owners, dealers and boat builders. The greatest bilge-draining device made; not only keeps the boat dry and comfortable, but also releases bottom suction, affording greatly increased speed; furthermore, rids hull of dangerous gas vapors. Automatic in operation, dependable, simple, compact. Made of high-grade bronze. Designed for cruisers, outboards and every type of boat.

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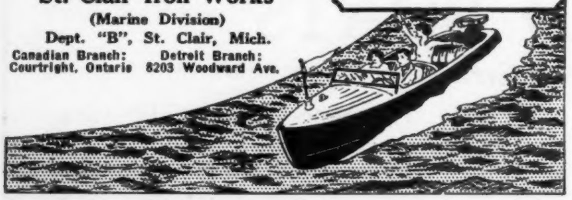
the many boats at the Show with the

ST. CLAIR Self-Bailer

as standard equipment



THE
RAMSEYBOUT
IS THE REAL
FLORIDA PLAY BOAT
when powered with a
Van Blerck, Jr. Inboard Motor
or a
Class "C" or Larger Outboard Motor

THE
1930 HOOH RACERS
are built for the NEW OUTBOARD MOTORS
Weights Conform to N. O. A. Rules

Built by
A. H. RAMSEY & SONS, Inc.
P. O. Box 932
71 N. W. 11 Terrace
MIAMI, FLORIDA

ASHBRIDGE BOAT FACTORY
WILMINGTON, CALIFORNIA

Leaders in Design — Originators of

1927—Boat "Spirit of Bronchitis"—First low freeboard hull.
1928—"Fire Fly"—Greatest increase in speed.
1929—"Brownie"—First stemless flying shingle.
1929—Nine official records made with K.D. hulls without factory or subsidized drivers.
400% increase in Outboard production over 1928.
1930—First Semi-Stepless Non-Tripping racers—banks on turns.
Five Race Models—light and sanctioned.

All genuine 1930 boats have ASHBRIDGE K.D. Flyer stamped on sterns. Watch the imitations.

SIX REMARKABLE OUTBOARDS

(*Continued from page* 440)

comparison in powerful, reliable performance.

Senior Speedster is a motor of 24.5 cubic inch piston displacement with a 2½-inch stroke by 2½-inch bore. Like the new Quad, it, too, employs electric starting. For speedy family runabouts, fast fishing outfits, or auxiliary power on the sailboat, the Senior Speedster is an ideal choice from every standpoint of ease of operation and dependable service.

For quiet operation, an underwater silencer dispels exhaust gases in a flat sheet through a wide outlet area, without back pressure and without breaking the water around the propeller. A new, more efficiently streamlined lower unit cuts the water sharply, reducing water resistance, and giving added speed. Centrifugal pump cooling assures a constant flow of water, keeping the motor cool at all speeds and under all loads. Alemite lubrication for the gear housing introduced by Ole Evinrude on the 1929 Elto motors, is made a part of the Senior Speedster and provides an easy, convenient method of lubricating the lower unit.

In order that the Senior Speedster might be a motor of lifelong dependability under any tasks which might be imposed, special attention has been given to all vital parts, in the reduction of possible friction and attendant wear. All bearings are oversize. Roller bearings are found on the steel connecting rods, a new feature entirely eliminating possible friction. The Elto carbureter, combining the advantages of float-feed carburetion with automatic valves, is practically flood-proof.

Similar to the Quad, the Senior Speedster may be obtained with a centralized control board, giving finger tip control of starting, stopping, acceleration, choke and spark. This is additional equipment. The oversize gasoline tank permits an ample gasoline supply for extended trips or distant cruises.

Senior Speedster is also available in a separate model without the self-starting feature. With the exception of this feature, the motor is identical with the electric-starting Senior Speedster. Atwater Kent battery type ignition gives instant quarter turn starting. A new type coil has been designed in such a way as to be removable for possible adjustment or inspection.

By merely moving the timer lever and pressing a button conveniently located at the extremity of the steering handle, the motor instantly reverses—an added feature for complete maneuverability in even the most crowded docking quarters. The Senior Speedster's weight is eighty pounds.

A distinct place in the 1930 line of Elto motors is occupied by the Hi-Speed and Service Speedsters. The Service Speedster, the rugged sturdy motor which won so many friends during 1929, retains its distinctive features for 1930. Weighing but sixty-two pounds, this motor presents the utmost in power and dependability on the ordinary type of boat, for the heaviest loads or the highest seas.

The Elto Lightweight, the first folding motor ever produced, became a most popular model because of its compactness and light weight. Its hinging feature appreciated by hundreds of users, permits the motor to be folded to the compact dimensions of 22 inches long, by 11 inches square. Its light weight of thirty-eight pounds brought a new meaning of portability into the outboard field. Atwater Kent battery type ignition assures quarter-turn starting.

Full reverse is possible with this motor by merely placing the timer in proper position, pressing the ignition button and releasing. The Elto Lightweight, because of an insistent popular demand, is retained in the 1930 line and will continue as the ideal choice in sturdy, light weight folding motors. It has ample speed and power for propelling the average boat as fast as it is designed to go. A carrying bar positioned exactly over the center of balance of the folded motor, makes it an easy one hand carry. It swings free, level and close to the body —as naturally and easily as a suitcase.

The new Outboard Motors Corporation Fold-Light is described elsewhere.

COMPLETE LINE OF FLYERS

Twelve fast types of outboard hulls will be produced for 1930 by the Ashbridge Boat Factory at Wilmington, California. In the racing division there will be two models in each class, A, B, C and D—one a light weight model for extreme speed and the other classified as the heavy racer. All models are semi-stepless in design and constructed of veneer, the A boat being 9 feet 9 inches in length and the B, C and D models 11 feet 9 inches.

The other four models consist of a 14-foot combination skiff and a series of runabouts in 14, 16 and 18-foot lengths.

Ashbridge Flyers have long since established a good name as record breakers in their respective classes, and with the new and improved models of hydroplane racing hulls should continue to maintain that reputation.

MoToR BOATINg's Ideal Series

Volume X

The Outboard Motor Boat Book

Plans, Specifications and Building Instructions for Over 30 Craft of Various Types and Sizes Suitable for Powering with Outboard Motors

THIS is the book which everyone has been waiting for. The scope of the craft, plans, specifications and building instructions of which are printed in this volume, is very broad. Everything is included from the smallest rowing dinghy suitable for a Class A Outboard Motor up to the fastest Class C racing hydroplanes. Plans of some of the outboard racing boats which have established world's records are included. All of the boats are easy for the amateur or novice to build. If you wish to use the boat on the seaboard or inland waters or on some lake or smaller body of water you will find a design which is suitable. If you are partial to sail and use the outboard as an auxiliary to get home with should the wind fail, you will find a number of designs of these boats, too. The plans and designs are particularly clear and easy to understand and no previous knowledge of boat building is necessary to turn out a successful boat. You should not fail to have a copy of this book.

THE CONTENTS OF VOLUME X

Rinky-Dink, a 7-Foot Pram
A useful little dinghy for carrying one or two persons between the shore and the larger boat.

Pirate, a Model Sloop
A complete design for constructing an excellent little model sailing sloop which can compete in model races.

Skipper, an Outboard Pram
An easily built little flat bottom speedster suitable for outboard engines in the smaller sizes, which will produce speeds up to about thirty miles.

Handy-Andy, a Sailing Dinghy
A simple little round bottom design fitted with a single sail which will furnish ideal sport for the skipper who is spending spare time while his larger vessel is at anchor.

Jan, a Sailing Skiff
A ten-foot flat bottom design which will serve equally well as a dinghy, sailboat and outboard engine tender.

Carryme, a Utility Dink
A useful little flat bottom dinghy which is easy to build and which will carry from three to four persons.

Apple Sauce, a Fast Little Speedster
A simple little design for a fast outboard racer, which will do over thirty miles per hour with a suitable engine.

Takapart, a Folding Punt
An original design for a small boat which is easily portable. Made in three sections which fit one inside the other so that it can be carried on an automobile.

Anabelle, a 10-Foot Dinghy
An excellent design for a 10-foot row boat arranged to carry three or four people and which can be used with any of the smaller outboard engines as a boat tender.

Nymph, a 10-Foot Sailing Dinghy
An attractive little boat fitted with a large sail and center board which will enable it to sail very nicely and which is also arranged to handle an outboard engine.

A 12-Foot Dinghy
A first class design for a slightly larger outboard engine tender capable of carrying four persons.

Jazz Bug, 12-Foot Hydroplane
A fast little hydroplane which will handle engines of class B and with which it should do thirty miles.

Smarty, a Utility Boat
A 14-foot flat bottom dinghy arranged to handle under sail or under power of an outboard engine. Should be able to carry at least six people.

Buster, a 12-Foot Sailing Dinghy
A round bottom dinghy of somewhat larger size, arranged for both sail and outboard engines.

Snapper, a Sailing Dinghy
A smart little round bottom tender, which can be used for much useful service in pleasure or work.

Gannet, a Combination Dinghy
A roomy round bottom sailing skiff with a dagger type centerboard and a large main sail. Will handle nicely under sail and can be used with an outboard engine also.

Green Diamond, a Fast Outboard
A 13-foot V-bottom hydroplane which has performed well in competition. It is designed for the modern fast outboard engine and should do 35 miles per hour quite easily.

Dancer, a 12-Foot Dinghy
An inexpensive little boat designed particularly as a substantial flat bottom row boat for tender and ferry service.

Whiz, a Baby Hydroplane
A sporty little speedster designed particularly for amateur construction arranged for use with an inboard engine of 20 h.p. with which it will do 30 m.p.h.

Baby Stepper, a 14-Foot Outboard Plane
A well tried and proven little design for a speedy outboard engine racing boat. Will handle engines up to class C with which the highest speeds will be secured.

Scandal, an Outboard Motor Boat
A flat bottom dinghy 14 feet in length which will be suitable for tender service and similar work.

Pixie, a V-Bottom Row Boat
A very able design for a large roomy row boat, capable of carrying a large load in passengers or baggage.

Nonpareil, an Outboard Engine Craft
A design generally similar to that of Pixie but decked over for the greater part of its length so that it is much more sea-worthy and able.

Marybelle, a 14-Foot Runabout
An excellent little design for a useful little runabout, designed to be driven by an engine of about 10 h.p. with which it will perform very well.

Sue, a Motor Skiff
A broad beamy 15-foot motor skiff arranged for an inboard engine of 5 to 6 h.p. With this it will do 6 to 7 miles per hour and will carry a very heavy load.

Edith, a Hand 15-Footer
A V-bottom design for an attractive little runabout arranged with a small engine in the stern and passenger space forward.

Toto, an Outboard Runabout
An inexpensive and easily built 16-foot runabout designed particularly for the modern outboard engine. An able little craft which will carry five persons comfortably.

Flattie, a 16-Foot Utility Boat
A simple little flat bottom skiff designed for a small single cylinder engine, practical for many kinds of service.

Whiz, an Outboard Speedster
A 16-foot stepless outboard speedster which is easy to build and fast enough for any one who does not care for extreme high speeds.

Transco, an Outboard Runabout
A sturdy and substantial 16-foot boat, built with lapstrake planking on a round bottom design. This boat will make a very able job for long cruises.

Sea Shell, a Serviceable Boat
An excellent design for a 17-foot round bottom boat, suitable for rowing, sailing, or an outboard engine.

Canvas-Back, a Canvas-Covered Canoe
This design follows the typical canoe style of construction and has a square stern which adapts it to the use of an outboard engine. The boat is 17 feet in length and has a beam of 3½ feet.

Gozo, A Petite Sloop
A pretty little design for a 16-foot auxiliary sloop arranged for a small inboard engine. The cabin arrangement provides berths for two persons and this little boat will make an excellent cruiser for the young fellows.

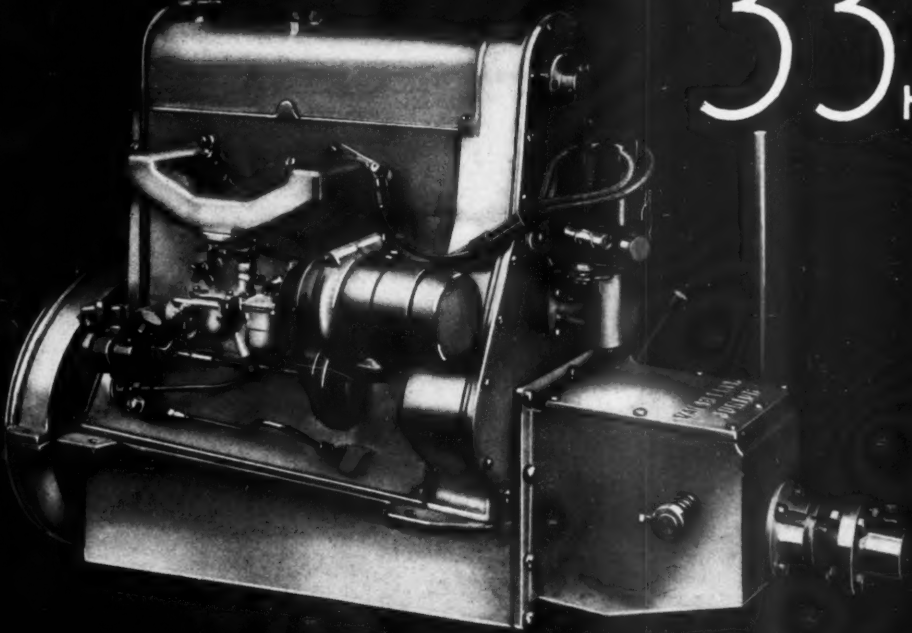
Price of the Outboard Motor Boat Book, Volume X, Ideal Series $3.00

Foreign Postage 50 Cents Extra

MoToR BoatinG, FIFTY SEVENTH ST. AT EIGHTH AVE., New York, N. Y.

THE VAN BLERCK JUNIOR

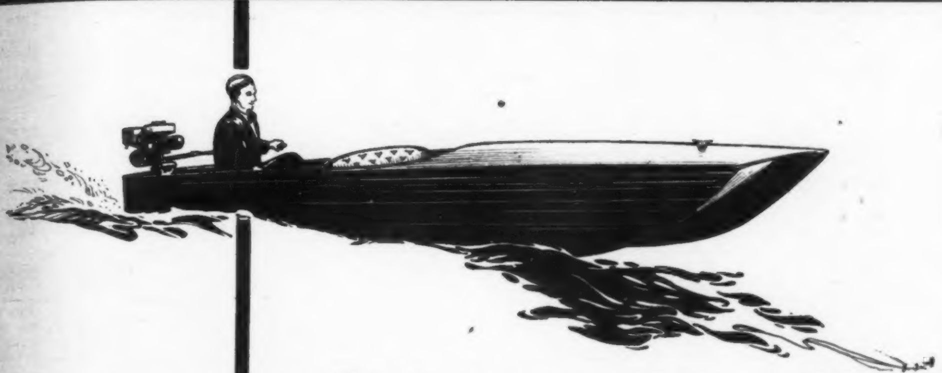
33 H.P.



The INBOARD motor that has modernized the small motor boat. For 1930, increased horse power. Thirty-three horse power at 3000 RPM. New features, increased bore, piston displacement 90 cubic inches, 2⅞ x 3½. • Adopted by the leading quality small boat builders in the United States and Canada. • Price complete, $390.00, which includes reverse gear, generator and electric starter. • Weight complete, 165 lbs., including generator, starter and reverse gear. • Not a converted automobile or motorcycle engine, VAN BLERCK engineered and VAN BLERCK built throughout. Write for latest catolog, showing how to convert your last year's outboard boat to a late model inboard.

VAN BLERCK MOTORS
RED BANK · NEW JERSEY

How Good is Your Boat?



The New Model 14 Outboard Runabout $225

A Sea Sled is the dryest craft of her size on lake, river or bay.

A Sea Sled is the most comfortable craft of her size.

A Sea Sled is the safest craft of her size.

A Sea Sled is the fastest craft of her size in water that's anywhere near rough.

Time and again it's been proved that no power boat afloat can do what these little things can do.

It's just a question of degree

All the way from poor—medium—fair—up to *good—better—best*.

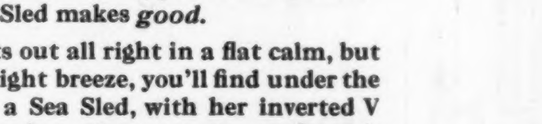
If your boat soaks a bunch of nice guests when they don't expect and don't like it, you'll find that for a dry boat, a Sea Sled makes *good*.

If your boat starts out all right in a flat calm, but gets ticklish in a light breeze, you'll find under the same conditions a Sea Sled, with her inverted V bottom and hollow bow, gives you a sense of much more stability. And as the weather gets worse the Sea Sled seems actually to get *better*.

If your boat scares your guests by rolling dangerously or sticking her nose under a swell, you'll find the buoyancy and ability of the Sea Sled a delight. The fact that she rises to meet every wave, and goes up and over like a bird, breeds a supreme confidence that for all round safety a Sea Sled is *best*.

1930 promises to be the greatest year yet in Sea Sled history. Out of the new showing of eleven models you can pick the exact type to fit your own personal need.

The larger Sea Sleds run from $2925.00 up to $8500.00 in price. And among the smaller models you can get a superior and classy little craft all the way from $150.00 up to $1475.00, depending entirely on the purpose for which you wish a boat.



The new fast Model 20 with built-in power

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HIGHEST FACTOR OF SAFETY **SEA SLED** OF ANY CRAFT OF THE SIZE

SPEED · · WITH COMFORT AND · · SAFETY

STRUCTURAL AND MECHANICAL SPECIFICATIONS OF STANDARDIZED RUNABOUTS, SEDANS AND OPEN BOATS

(Continued from page 364)

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Dameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
HADLEY PLANE																							
Ozone Park, L. I.																							
1-Step Hydro						Batten	Oak	12Oak	Mahogany	Brass	Mahogany	Monel	Miller-4	110	151 cu.in.	4700	440	52	13x17	1 Monel	10		
3-Step 151 Hydro						Batten	Oak	12Oak	Mahogany	Brass	Mahogany	Monel	Miller-4	110	151 cu.in.	4700	440	52	13x17	1 Monel	10		
For'd Cockpit Hydr						Batten	Oak	12Oak	Mahogany	Brass	Mahogany	Monel	Miller-4	110	151 cu.in.	4700	440	52	13x17	1 Monel	10		
JARDINE																							
Atlantic City, N. J.																							
Baby Skiff						Smooth Bottom, LapSides	⅝x¾ Oak	Pine	⅝ Cedar	Cpr. & Brs.	Mahogany	Bronze	Gray	60	3⅜x4	2800	570	21	14x12	1⅛ Everdur	24		
Flying Fish, Jr.		2				Smooth Bottom, LapSides	⅝x1	Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Bronze	Gray	125	3⅜x4½	2900	830	24	15x13	1⅝ Everdur	60		
KING SEA SKIFF																							
Highlands, N. J.																							
26-28-30 Open						Lap Strake	1⅜x⅞ Oak	9Oak	¾ Cedar	Cpr. & Brs.	Mahogany	Brs. & Bze.	Optional					16-35		Monel	60		
28 Sedan Sp'tsman		2				Lap Strake	1⅜x⅞ Oak	9 Oak	¾ Cedar	Cpr. & Brs.	Mahogany	Brs. & Bze.	Optional					16-35		Monel	60		
LUDINGTON																							
Philadelphia, Pa.																							
Sportcar						Batten	Spruce & Oak	18Pine	Mahogany	Brass	Mahogany	Monel	Gray	37	3⅜x4¼	2800	550	30		Bronze			
Sportcar De Luxe						Batten	Spruce & Oak	18Pine	Mahogany	Brass	Mahogany	Monel	Gray	37	3⅜x4¼	2800	550	30		Bronze			
NORTH STAR																							
Holland, Mich.																							
Runabout						Bat. Side, Dbl. Bot.	¾x2½ Oak	121⅝x3⅝ Oak	⅞ Mah.	Brass	Nickel	Bronze	Continental	62	3⅜x4	2600	600	28		1⅛ Monel	30		Delco 6-V.
OWENS																							
Annapolis, Md.																							
20 Runabout						Batten	8 Oak	2x4 Oak	Mahogany	Copper	Mahogany	Bronze	Optional	40–110				22–35			30–50		
SEA-LYON																							
New York, N. Y.																							
30						Smooth	6x24 Oak	1¼x5½ Oak	½ Mah.	Bronze	Nickel Silver.	Bronze	Chrysler	75	3¼x4½	3200		30	13x12	1⅛ Bronze	33		
35						Smooth	6x24 Oak	1¼x5½ Oak	½ Mah.	Bronze	Nickel Silver	Bronze	Chrysler	110	3⅝x5	3000		35	15x14	1⅛ Bronze	33		
40						Smooth	6x24 Oak	1⅜x6 Oak	½ Mah.	Bronze	Nickel Silver	Bronze	Scripps	200	5x6	2300	1200	42	17x23	1¼ Bronze	53		
40						Smooth	6x24 Oak	1⅜x6 Oak	½ Mah.	Bronze	Nickel Silver	Bronze	Kermath	200	5x6½	2500	1400	44	18x24	1¼ Bronze	53		
45						Smooth	6x24 Oak	1⅜x6 Oak	½ Mah.	Bze. & Cpr.	Nickel Silver	Bronze	Sterling	200	5¼x6	2100	1500	45	18x24	1¼ Bronze	65		
46						Smooth	6x24 Oak	1⅜x6 Oak	½ Mah.	Bze. & Cpr.	Nickel Silver	Bronze	Sterling	200	5¼x6	2100	1500	45	18x24	1¼ Bronze	65		
60						Smooth	6x24 Oak	1⅜x24 Oak	½ Mah.	Bze. & Cpr.	Nickel Silver	Bronze	Liberty	425	5x7	2000	1500	55	24x34	1⅞ Monel	75		
SEA SLED																							
West Mystic, Conn.																							
28						Smooth	15 Oak	1½x4 Oak	⅜ & ⅛ Mah.	Cpr. & Brs.	Nickel Silver	Bronze	Hall Scott	200	5x7	1750	1600	38	29x27	2⅛ Bronze	65		
26						Smooth	15 Oak	1½x4 Oak	Mah. 7/16 Side 5/16 & 3/16 Bot.	Cpr. & Brs.	Nickel Silver	Bronze	Kermath	200	5x5½	2200	1160	40	26x26	2⅛ Bronze	65		
22						Smooth	15 Oak	1¼x2⅜ Oak	Mah. 7/16 Side ¼ & ⅛ Bot.	Cpr. & Brs.	Nickel Silver	Bronze	Universal	117	3½x4½	2900	800	30	22x14	1¾ Bronze	35		
22						Smooth	15 Oak	1¼x2¾ Oak	Mah. 7/16 Side ¼ & ⅛ Bot.	Cpr. & Brs.	Nickel Silver	Bronze	Chrysler	110	3⅝x5	2900	890	30	22x14	1¾ Bronze	35		
SUNFLOWER																							
Lake Tomahawk, Wis.																							
Sunflower 23							Oak		Mahogany				Gray	60–130									
TOPPAN																							
Medford, Mass.																							
16 Family Skiff						Lap Strake	Oak	Oak	Pine	Galv.	Oak	Oak	Universal	8	4⅜x4½	1200	298	11	13x10	⅞ Bronze	15		
18 Family Skiff						Lap Strake	Oak	Oak	Pine	Galv.	Oak	Oak	Universal	15	2⅝x4	1800	350	16	13x10	⅞ Bronze	15		
22 Family Skiff						Smooth	Oak	Oak	Pine	Galv.	Oak	Galv.	Universal	15	2⅝x4	1500	350	12	13x10	⅞ Bronze	15		
18 SwampscottDory						Lap Strake	Oak	Oak	Pine	Galv.	Oak & Cyp.	Galv.	Universal	8	4⅜x4½	1000	298	10	13x10	⅞ Bronze	12		
VENTNOR																							
Atlantic City, N. J.																							
26-A						Batten	1x1 Oak	92x8 Pine	⅝ Cedar	Brass	Mahogany	Everdur	Gray	72	3⅜x4⅝	2900	640	26	14x12	1 Monel	35		
26-B						Batten	1x1 Oak	92x8 Pine	⅝ Cedar	Brass	Mahogany	Everdur	Gray	125	3⅜x4½	3200	830	35	14x14	1 Monel	35		
36						Batten	1¼x1¼ Oak	103x8 Pine	⅞ Cedar	Brs. & Galv.	Mahogany	Everdur	Lee-Liberty	400	5x7	2000	1600	50	22x34	1½ Monel	84		

(Continued on page 474)

When the Sun Goes Down—

And you have logged another 350 knots for the twenty-four hour run—you will find your Cooper-Bessemer Diesel Power Plant purring along just as smoothly, quietly and as free from vibration as the day you weighed anchor . . . .

¶ It is this day-after-day smoothness, this unfaltering serviceability, that has made Cooper-Bessemer Diesels outstanding among yacht power plants.

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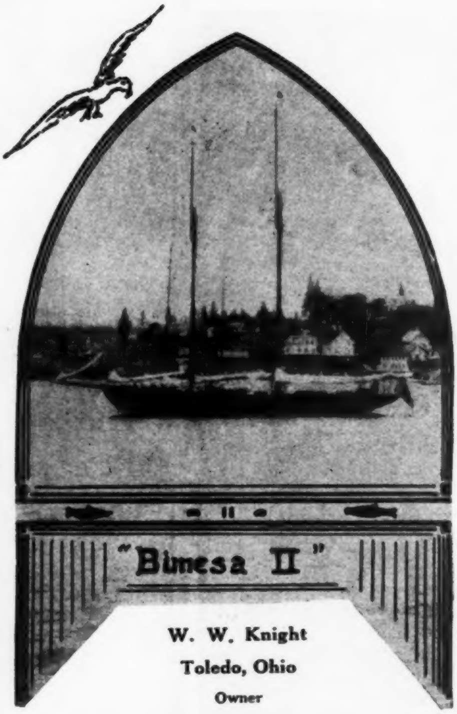
DIESEL MARINE ENGINES
"POWERING AMERICA'S FINEST YACHTS"



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Owner

Dragging Both Anchors

"IT was a feeling of relief to have the engine turning over slowly in case of emergency when the 'Bimesa' was dragging both anchors in the lee of St. Paul's Island during a hard storm."

Every yachtsman with cruising experience appreciates what it meant to those aboard to have that Standard yacht Diesel engine on the job, dependable, taking the strain off the anchors and ready to drive full power into the gale.

"Twice during the 3500 mile cruise last Summer the engine was going for 45 hour stretches without a stop and with no trouble. It was very satisfactory and would stand a lot of hard work."

PERFORMANCE IS THE REAL TEST

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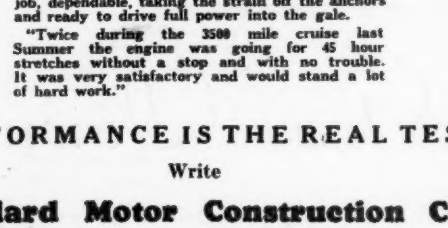


STANDARD YACHT DIESELS

ALL ABOUT AUXILIARIES

(*Continued from page* 156)

her over (a *very* dangerous maneuver) and run like a bat out of hades back for your mooring. If you thought you weren't going fast enough on the way out you are convinced you are going too fast on the way in. In crowded places 7 miles an hour before the wind in a sailboat seems like 120 in a motor boat. You don't have time or room to round up to your mooring the way Secretary of the Navy Charles Francis Adams and a few other masters of the art insist upon doing, but man the rail with crew and boathooks and catch the buoy as you shoot by. This requires quite a lot of skill, but I have seen it done without the loss of a single man by drowning. (In fact, the only fatality I have observed in work of this sort was that of a sailor on another boat who choked to death laughing.) When the buoy is aboard and the danger is over the laborious work of lowering sail, furling it, covering it, and straightening up the running gear commences, and you are lucky if daylight still abides with you when at last you row ashore.

THE TROUBLE OF SAILING CAN BE AVOIDED

The above, I contend, is the average motor boatman's idea of the joys of sailing, and there is a great deal to be said in support of it. But all this nuisance is avoided if you're not too proud to use your auxiliary motor. With a good motor in your boat (and all motors are good nowadays) you can leave the sails lay, get under way safely with power, chug straight out of port, throwing up almost as handsome a wave as the regular motor boat, and go wherever you like while dayilght lasts. Then in the soft twilight you can return home, pick up your mooring without endangering human life, shut off the motor, and row ashore full of vigor and satisfaction.

Some people may say that this can be done with an out-and-out motor boat, so why bother to own a sailboat? Yet a great many yachtsmen of impeccable character are employing auxiliaries in this fashion, and there must be some good reason for it. The reason, I imagine, harks back to that unconscionable habit of the wind of blowing great guns when you don't want it to. If you have nothing but a motor in your boat you're licked from the outset. But if you have sails for sailing, the wind always goes flat and you can proceede under power with the greatest ease and clearest conscience.

THE RIGHT OF WAY IMPORTANT

Sails are frequently used if you want to establish the right of way and make shipping keep clear of you. In this connection, however, it is well to have your motor exhaust under water, as a telltale jet of steam or water squirting from the side of a boat shows that she is using power and is therefore unentitled to a sailboat's right of way. It is also essential to have a little wind in the sails to heighten the deception. There is nothing, I think quite as satisfactory as sailing close-hauled on the starboard tack and making all manner of port-tack sailers, steamers, and motor boats alter course and pass astern of you. And you'd be surprised how readily and cheerfully they do it—oh yes, you would.

A friend of mine tells a story about sailing down the Sound one lovely day when he was overtaken by an excursion boat, loaded with passengers. My friend is one of those hard-bitten old cases who can't be perusaded to put a motor in his boat (but who will accept a tow any calm day) so he really was sailing and actually had the right of way. Not that it did him much good at first. My friend was below at the time and his wife, who was on deck, had to call out, "You'd better come up, Lou, or this steamer will cut us in two."

So Lou went topside and saw the excursion boat steering a bee line for the middle of his transom. He unlimbered a few respectable phrases (being handicapped by his wife's presence) which had no effect on the progress of the steamer. The sailboat continud to sail her course, and the steamer continued to plough after her. Finally Lou had a happy thought. "If you crowd me, big boy," he called through a megaphone, "you'll find a couple of steamboat inspectors looking for your ticket tomorrow."

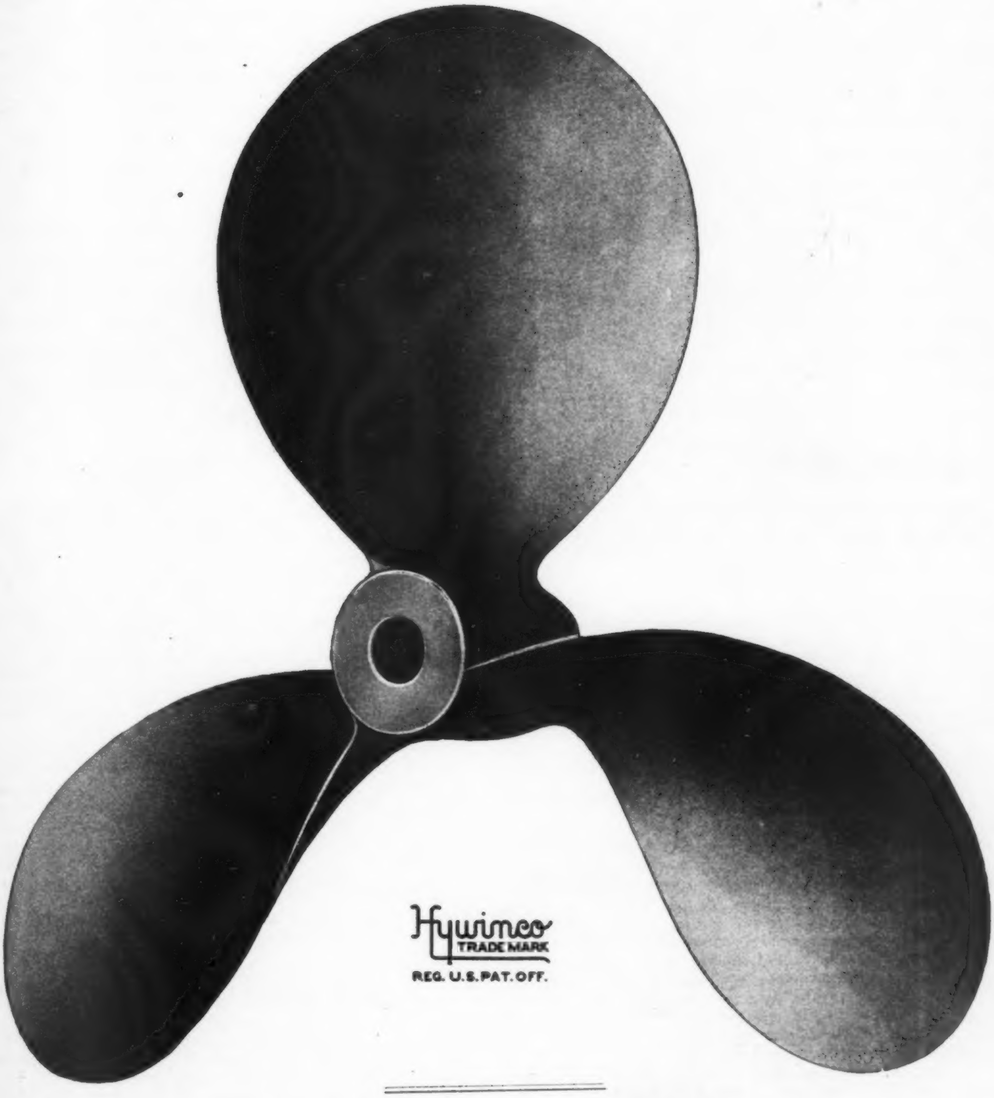
The threat worked and the steamer sheered off. But one of the excursionist on the upper deck had the last word in the affair. He called out, "Vell, if yer vanted to go acrost, couldn't yer hold out your hendt?"

FROM NOVICE TO EXPERT

If I relate one more advantage of the auxiliary over the motor boat, perhaps my indulgent readers will permit me to knock off and call it a day. Ownership of a sailboat puts you straight out of the new-beginner class. As long as you buzz around in a runabout or a cruiser people may suspect you of being only one very short step removed from that low order of being known as motorist. You can navigate ever so carefully, leaving red buoys to port on your way into a harbor,

(*Continued on page* 470)

HYDE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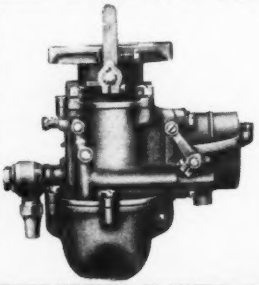
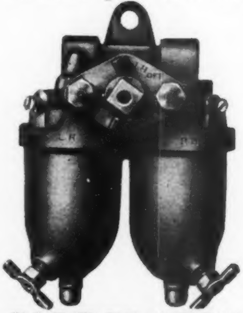
MARINE CARBURETORS

The time-tested Zenith principle of carburetion as applied to marine requirements has demonstrated its value in the Zenith Marine Carburetor. It is positive and dependable in action. No moving parts affect the mixture. Rough seas or quick turns have no effect on engine performance. The power boat owner cannot afford to economize on Safety—that is why the Zenith Marine Carburetor has grown steadily in favor and is recognized as setting a new standard in marine carburetion. To get the most in Safety and Satisfaction out of your power boat this year—equip with Zenith MARINE carburetion!

HIGH-EFFICIENCY FILTERS

Zenith *high-efficiency* filters are built in various models for every make and size of gasoline and diesel engine. They remove ALL impurities at sustained speeds and in the hardest service. Efficient in action, easy to install and clean, Zenith filters are sturdy and durable, with *no fragile parts.* Duplex Zenith models provide maximum safety if you frequent rough off-shore water, strong current or tides. They protect your fuel pumps or injector nozzles. Prevent shutdown due to dirt and water—install Zenith *high-efficiency* filters. Send for catalog and dealer's name.





ZENITH-DETROIT CORPORATION

Manufacturers of Zenith Carburetors and Filters

DETROIT - - MICHIGAN

BRANCHES: NEW YORK - CLEVELAND - CHICAGO - MILWAUKEE

THAT DEEP SEA MOTOR

(*Continued from page* 154)

sixty miles away at eight o'clock they were there. The factory took the thing apart, removed the remaining water, put in a new magneto, and The Boy and the motor were home by ten that night. I wish I could say about my golf what I can say about that motor. From then on it never missed a putt. We have a bigger one now, but I am sure a no better one. The bigger one may beat the smaller one for speed on the level, but I am sure that the little one still holds the record for straight down. And let me add this: now when I go out with a motor I tighten those clamps until I can't tighten them another thirty-second of an inch. Then I give them a couple of more turns.

But I still insist that if this had been a cork motor, this would not have happened. I realize that the manufacturers are making them as light as they can, but I still doubt if they will float. If nothing else can be done a motor should be so arranged that it would send up a sky-rocket, say, every five minutes until it is located, in case anybody drops, throws or yanks it overboard. In any event, I would advise owners not to depend on trees, light-houses and other movable objects. What they should do, in case anything happens, is to mark an X on the water where the motor was last seen, together with any information possible as to the direction in which it seemed to be going. This will save the annoyance of dragging one end of the lake, river or ocean, as the case may be, when the motor is at the other, which is very embarrassing.

I have thought of the possibility of tying one end of a rope to the motor and the other end to my foot, but I have rather given up the idea, so many people who owe me money seemed to be so enthusiastically in favor of it. Even people who do not owe me any particular grudge, or money, have expressed a desire to see how it would work. I expect to make the experiment sometime, but it will be when I can get some saxophone player out in the boat. While I would hate to lose another motor, it might be worth it. Perhaps I could persuade him to take his saxaphone with him, in which case I know it would be well worth the money.

But if the manufacturers can't make the motors lighter than water, they ought to be able to think up something. They might include an anchor as an accessory, the rope from the motor to be tied to the anchor. Then, if the motor went overboard, of course the anchor would follow, which would be much pleasanter than if the rope were attached to your foot. Tying the rope to your foot would be simple, very simple, but this would be even simpler. After the motor had gone overboard, with anchor attached, all you would have to do would be to locate the anchor and then follow the string until you came to the motor. It all looks very practical and inexpensive, and I hope the manufacturers will consider it. If they think there might be difficulty in locating the anchor, and both the anchor and the motor might be lost, then the anchor might be untied just as the motor went overboard. These things can all be worked out, if the manufacturers will only put a little study on them.

There are other things that can be done to improve outboard motors, but if the manufacturers will take care of this, that will do for the present. If they don't do any more than get out a book on first aid for drowned motors that will help some. I know of nothing as pathetic as a motor with more water in it than it has any use for. So let us take care of this first; and then, if the manufacturers can't think of anything else to do to improve their motors, I shall be glad to tell them some other ideas, some of them my own, and some of them ideas I have picked up around local blacksmith shops, garages and groceries on how an outboard motor should be made in the first place.

ALL ABOUT AUXILIARIES

(*Continued from page* 468)

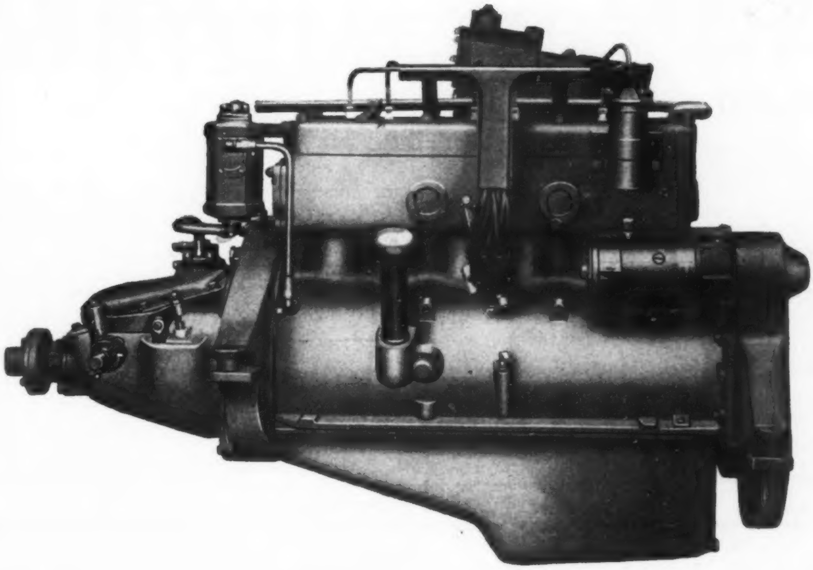
giving mid-channel buoys a wide berth, and so on. No matter how circumspect your handling of a motor boat is, you are always under suspicion of being a novice.

But when you step up into the sailboat class all is changed. Suppose you happen to mistake an obstruction buoy for a channel buoy and run high and dry on the sand. You alibi is perfect. "Yes," you say, "I knew that middleground was there and meant all along to avoid it. But a strong cross current got hold of me, the wind died, and before I could start the faithful old mill I was out of luck. Of course, it didn't make any difference, as a shoal draft motor boat came along a few minutes later and yanked me clear. Great things, motor boats. I don't know what we out-and-out sailors would do without 'em. And the men who run them are such good good sports—always ready to lend a helping hand. I used to be one and I know."

By all means, swap your motor boat for an auxiliary. You'll learn in one season that I haven't painted half the joys of ownership.

THE NEW CHRYSLER CROWN

3⅛" bore by 4⅛" stroke — 6-cylinder



CLIMAXING the three successful seasons since Chrysler Marine Engines were placed on the market, Chrysler Motors now announces the "Crown"—of typical Chrysler quality and performance ability—developing 75 horsepower.

The new Chrysler "Crown" has been especially created to fill the need for a light, high-speed engine of high quality, suitable for small, fast runabouts and boats of similar type.

It is engineered and built with the same skill and thoroughness that enabled Chrysler Imperial and Chrysler Royal Marine Engines to win world-wide favor among motor boat enthusiasts and that brought their adoption by leading builders.

The new Chrysler "Crown" will be exhibited for the first time at the Silver Anniversary Motor Boat Show to be held at the Grand Central Palace, New York, January 17 to 25, 1930.

FEATURES

Down-Draft Carburetion—Positive Gasoline Pump—New Hot-Spot Manifold—Oil Cooler—Rugged Helical Timing Gears—Chrysler-Built Reverse Gear, with outside reverse band adjustment.

For further information, address Marine Engine Division, Chrysler Corporation, Detroit, Michigan

Chrysler ***MARINE ENGINES***

CHRYSLER MOTORS PRODUCT

The PROTECTOR SLIP BOATS

The beautiful motor craft of today must be protected from the weather. The Protector Slip affords not only a perfect protection, but luxurious living quarters if desired.

The Slip Boat without the Deck House makes an ideal landing float, and its unique construction admits of the easiest possible handling when hauling out for the winter.

From $1,000

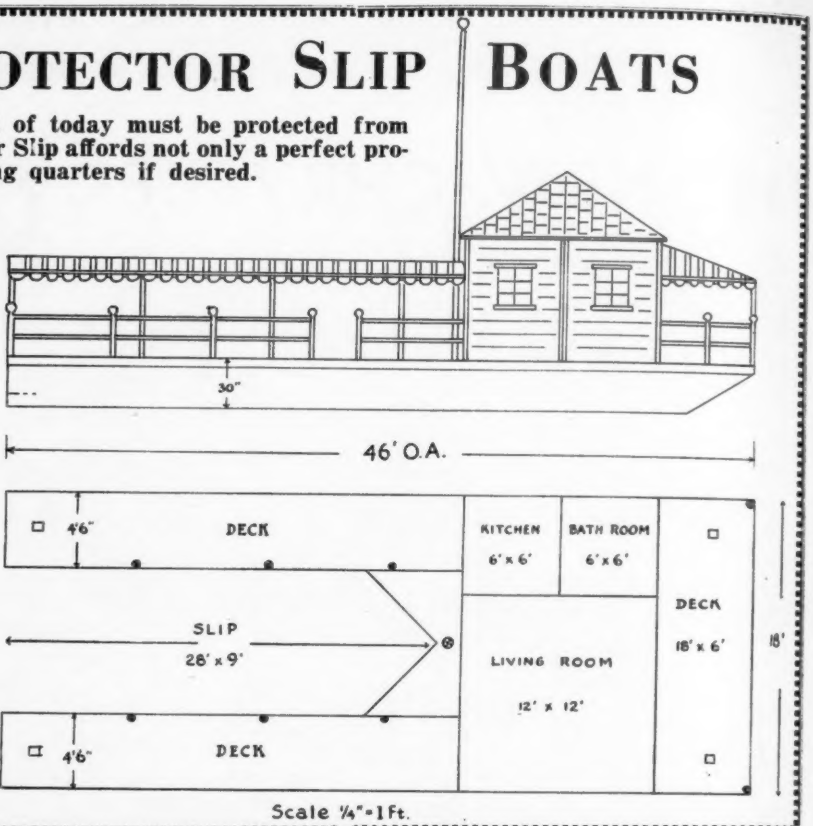
Built to fit individual requirements—(any size)

Shipped anywhere

Exclusive Sales Agents:

THE PROTECTOR SLIP BOATS
Fidelity Building
Corner Lexington Ave. & 87th St.
RAYMOND C. MALLOY, Mgr.

Telephones: Atwater 5600-5601



BLUE JACKET A NEW FOUR

(Continued from page 126)

outboard drives in which a reversing mechanism is incorporated. Its size is so small, that in either location in a boat, it takes up but little valuable space.

Features of the Blue Jacket which will appeal to motorboatmen include: the use of eight cylinder head studs for each cylinder, thus making the connection water-tight, and oil tight, as well as virtually eliminating bothersome gasket blow-outs.

The crankshaft is a five-bearing and is 100 per cent counterbalanced and, like all Universal crankshafts, is put in running balance on a Gisholt dynamic balancer. The end thrust is ingeniously taken up at the timing gear end, and is adjustable by shims. Pistons used are of an entirely new design to assure correct heat distribution; any distortion due to uneven expansion is prevented through the use of a cast-in strut.

The Blue Jacket has full force feed lubrication to every bearing, through drilled crankshafts, camshaft, and connecting rods. Oil pressure relief is on the outside of the crankcase for convenience of adjustment. A special oil filter and oil cooler has been developed for this motor.

The cooling system has been given special attention because of the high speeds at which these motors will ordinarily be operated. The cylinders are entirely surrounded by water; the valve seats and even the valve stems are completely water cooled. The water pump is of the gear-type in a special Universal design.

Cylinder heads (together with all other castings used in this motor as well as throughout the entire Universal line) are cast in Universal's own foundry. They are of the high turbulence type, of course, and are specially ribbed to rapidly dissipate heat, preventing pre-ignition.

The quality of the valve mechanism is suggestive of the high standards adhered to throughout the entire motor. The valves themselves are extra large, providing an inch and a half clear opening. Thompson silichrome is used for the exhaust valves, and special Thompson nickel steel for the intake valves. Valve springs are of vanadium steel, cadmium plated. Tappets are of white iron with tool steel in the head of the adjusting screw. Both valve guides and tappet guides are removable.

Standard equipment is unusually complete: Joe's reverse gear, Stromberg carbureter, electric starting, lighting, and ignition system, water pump, built-in hand sump pump, oil cleaner and cooler, tachometer connection, thermometer connection, and an extra drive for the operation of a governor, bilge pump or other accessory, A. C. type fuel pump, instrument panel.

The introduction of this new motor by Universal will be welcomed by hosts of motorboatmen, for it provides reliable, economical, and husky power with which to drive small runabouts with all the speed, quietness, and convenience which heretofore has been available only in more expensive boats.

While the Blue Jacket is in many respects the high spot of Universal's announcements for the coming season, it does not represent the only alteratio in their well known line. The Universal Sixes and Eights which have so distinguished themselves during the past season have been revamped in many particulars and have been stepped up in horsepower. The Sixes are now available in two powers, one at seventy-seven horsepower and another for greater speed with eighty-eight horsepower. The new Eight develops one hundred and fifteen horsepower. The Universal Sixes and Eights are true marine motors—that is, designed and built in every particular for marine use exclusively.

The well known Universal Flexifour, Super Four, and Single Cylinder motors are continued in answer to the persistent demand for these reliable, compact, and powerful units.

DEPENDABLE MARINE EQUIPMENT

Last year Wilcox, Crittenden & Co., Inc., Middletown, Conn., introduced their Sea-Clo Toilet, and the great satisfaction given by this toilet confirmed the manufacturer's statements—that great study, thought and testing had been done before proceeding with its manufacture.

This year three new modern Sea-Clos will be introduced by Wilcox, Crittenden & Co., Inc. The Sea-Clo of 1929 is still further improved with even easier, more positive operation and requires less space for installation.

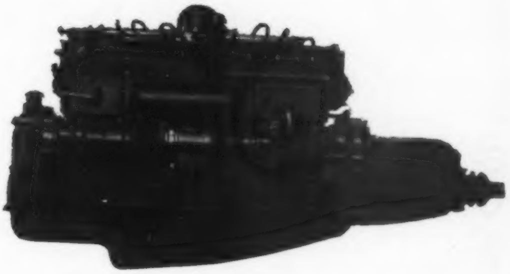
The Sea-Clo Junior—an entirely new idea in marine toilets—designed for use in small day cruisers and runabouts, small, compact, but with all the proven advantages of the Sea-Clo.

The Sea-Clo Senior—a beautifully designed vertical pump, foot valve toilet—for installation in bathrooms of larger yachts.

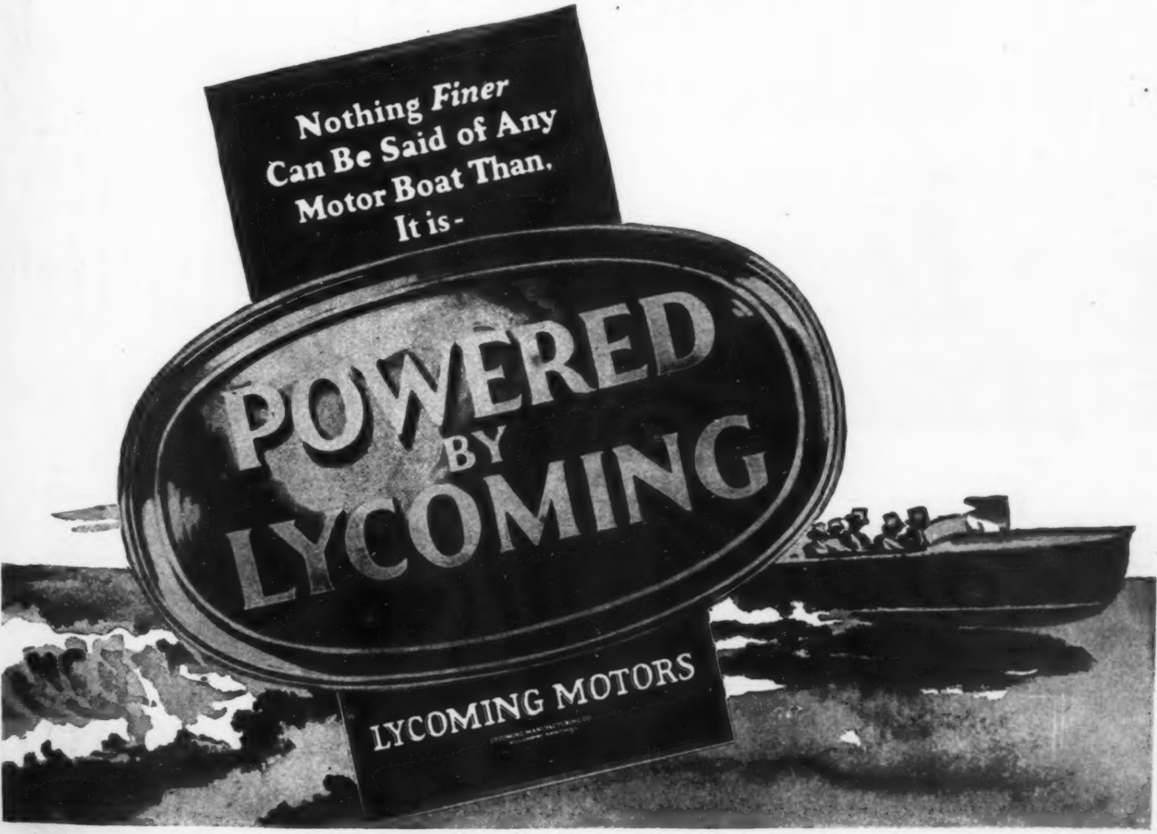
The Sea-Clo Super-Senior—a still larger, more de luxe design of toilet with a proven tested large-capacity pump.

Announcing
Complete Line of Marine Motors

4 to 12 cylinders
40 to 300 horsepower



LYCOMING MANUFACTURING CO.
WILLIAMSPORT, PA.


Nothing *Finer*
Can Be Said of Any
Motor Boat Than,
It is-
POWERED BY LYCOMING
LYCOMING MOTORS

STRUCTURAL AND MECHANICAL SPECIFICATIONS OF CRUISERS AND EXPRESS CRUISERS

(Continued from page 350)

NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
WHEELER PLAYMATE, Bklyn, N. Y.																							
De Luxe Junior	1	3	1	1	....	Lap or Sm.	¾x1½ Oak 7	4 Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Brass	Chrysler	110	3⅝x5	2800	1125	24	18x22	1⅜ Tobin	70	25	....
Standard Junior	1	3	1	1	....	Lap or Sm.	¾x1½ Oak 7	4 Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Brass	Gray	72	3⅜x4⅝	2200	700	14	18x12	1⅜ Tobin	70	25	....
ShortCabin Junior	1	2	....	1	....	Lap or Sm.	¾x1 £ Oak 7	4 Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Brass	Chrysler	70	3½x5	2200	890	14	18x12	1⅜ Tobin	70	0	....
Standard	1	4	1	1	1	Lap or Sm.	¾x1½ Oak 7	4 Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Brass	Chrysler	110	3⅝x5	2800	1125	20	19x20	1⅜ Tobin	100	35	....
Short Cabin	1	2	....	1	1	Lap or Sm.	⁴⁄₄x1½ Oak 7	4 Pine	¾ Cedar	Cpr. & Brs.	Mahogany	Brass	Chrysler	110	3⅝x5	2800	1125	21	19x20	1⅜ Tobin	100	35	....
Standard Super	1	4	1	1	1	Lap or Sm.	¾x1¾ Oak 7	4 Pine	¹¹⁄₁₆ Cedar	Cpr. & Brs.	Mahogany	Brass	Scripps	150	4¾x5¾	2200	1125	20	20x13	1⅜ Tobin	120	50	....
D'ble Cabin Super	2	6	1	1	1	Lap or Sm.	¾x1¾ Oak 7	4 Pine	¹¹⁄₁₆ Cedar	Cpr. & Brs.	Mahogany	Brass	Chrysler	110	3⅝x5	2800	1125	17	20x17	1⅜ Tobin	120	50	....
Sport Fisherman Super Playmate	1	2	1	1	1	Lap or Sm.	¾x1¾ Oak 7	4 Pine	¹¹⁄₁₆ Cedar	Cpr. & Brs.	Mahogany	Brass	Kermath	200	5x5⅞	2000	1500	26	21x13	1⅜ Tobin	120	50	....
StandardPlaymate Cruiser	2	6	1	1	1	Lap or Sm.	⅞x1¾ Oak 7	4 Pine	⅞ Cedar	Cpr. & Brs.	Mahogany	Brass	Sterling	200	5½x6	2000	1540	21	22x13	1⅜ Everdur	150	60	....
Double Cab. Playmate Cruiser	2	6	1	1	1	Lap or Sm.	⅞x1¾ Oak 7	4 Pine	⅞ Cedar	Cpr. & Brs.	Mahogany	Brass	Sterling	200	5½x6	2000	1540	20	22x13	1⅜ Everdur	150	60	....
Combination Sed. Playmate Cruis.	1	6	1	1	1	Lap or Sm.	⅞x1¾ Oak 7	4 Pine	⅞ Cedar	Cpr. & Brs.	Mahogany	Brass	Sterling	200	5½x6	2000	1540	20	22x13	1⅜ Tobin	150	60	....
Single Cabin Playmate Senior	2	6	1	1	1	Lap or Sm.	1x1⅞ Oak 7	5 Pine	1 Cedar	Cpr. & Brs.	Mahogany	Brass	Sterling	200	5½x6	2000	1540	18	22x13	1⅜ Everdur	225	70	....
DoubleCabinPlaymate Senior	2	6	1	2	2	Lap or Sm.	1x1⅞ Oak 7	5 Pine	1 Cedar	Cpr. & Brs.	Mahogany	Brass	2-Chrysler	110 ea.	3⅝x5	2800	1125ea	22	22x18	1⅜ Everdur	225	70	....
Combination Sed. Playmate Senior	2	8	1	1	1	Lap or Sm.	1x1⅞ Oak 7	5 Pine	1 Cedar	Cpr. & Brs.	Mahogany	Brass	Sterling	200	5½x6	2000	1540	18	22x13	1⅜ Everdur	225	70	....
DoubleCabinPlaymate Master	2	6	1	2	2	Lap or Sm.	1⅛x2¼ Oak 7	5½ Pine	1 Cedar	Cpr. & Brs.	Mahogany	Brass	2-Sterling	200 ea.	5½x6	2000	1540ea	24	23x13	1⅜ Everdur	300	95	....
Combination Sed. Playmate Master	2	8	1	2	2	Lap or Sm.	1⅛x2¼ Oak 7	5½ Pine	1 Cedar	Cpr. & Brs.	Mahogany	Brass	2-Sterling	200 ea.	5½x6	2000	1540ea	24	23x13	1⅜ Everdur	300	95	....
WILEY Oxford, Md.																							
41 Bridge Deck Cr.	2	6	1	2	2	Smooth	1½x1¼ Oak 9	4 Pine	1 Cedar	Copper	Mahogany	Bronze	Optional	150	5½x6½	1600	......	16	....	Bronze	120	50	....
50 Enclosed Bridge.	3	8	1	3	3	Smooth	2x2 Oak 1	2Pine	1¼ Cedar	Galvanized	Plain	Oak	Lathrop	100	5½x6½	1000	......	11	....	Bronze	120	75	Homelite
GAR WOOD Detroit, Mich.																							
Express Cruiser.....	2	6	1	2	2	Smooth	Sawn 3	0Oak	Dble Mah.	Brs. & Bze.	Chr. Plated	Bronze	2 Gar Wood	425–525	5x7	2200	1550	42 47	2–22x30	1½ Bronze	500	100	32V. Delco

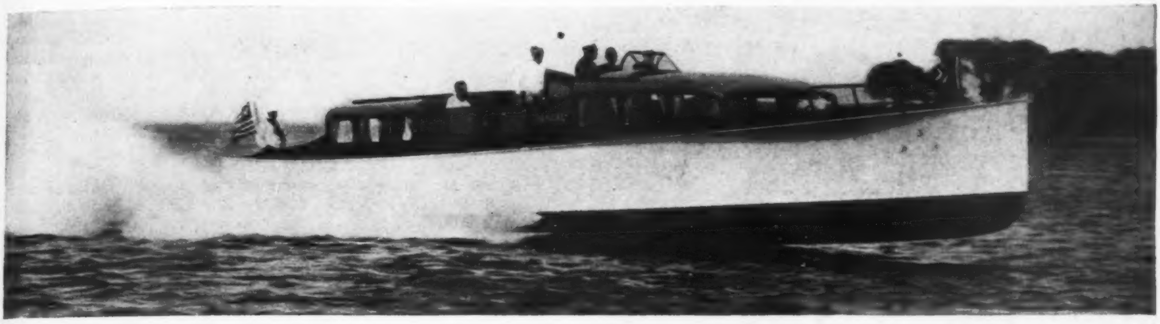
STRUCTURAL AND MECHANICAL SPECIFICATIONS OF STANDARDIZED RUNABOUTS, SEDANS AND OPEN BOATS

(Continued from page 466)

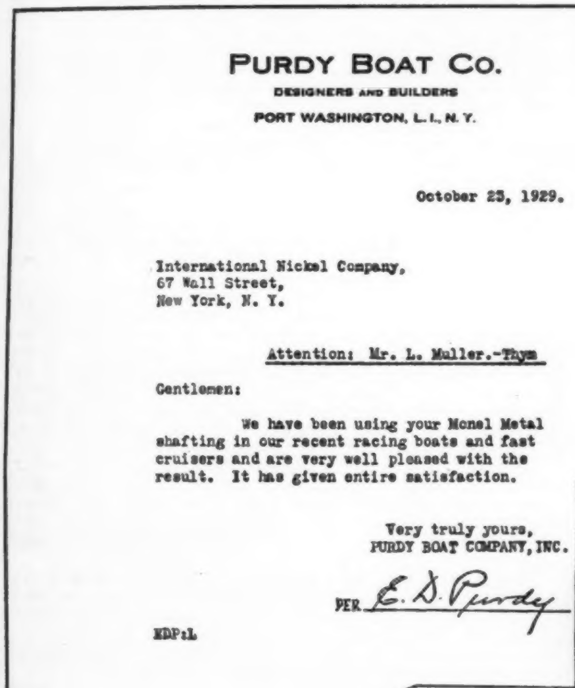
NAME OR NUMBER OF MODEL	NUMBER OF					Planking: Smooth, Lap Strake, Batten	MATERIAL AND SIZES						ENGINES					Boat Speed	Propeller, Diameter and Pitch	Material of Shaft, and Size	TANKS—GALS.		Separate Generator, Make and Size
	State-rooms	Berths	Galley	Toilet	Wash Basin		Frames and Spacing	Keel	Planking	Fastenings	Trim	Rudder	Make	Horse Power	Bore and Stroke	Revo-lutions	Weight				Fuel	Water	
GAR WOOD Detroit, Mich.																							
30 Runabout......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Nickel Silver	Bronze	Chrysler	125	3⅝x5	3000	930	32	15x14	1x1¼ Bze.	40	....	....
30 Sedan.........	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Nickel Silver	Bronze	Chrysler	125	3⅝x5	3000	930	30	15x14	1x1¼ Bze.	40	....	....
40 Runabout......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs-Bze.	Chr. Plated	Bronze	Optional	200	5x5¾	2250	......	42	17x24	1x1¼ Bze.	60	....	....
40 Sedan.........	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Optional	200	5x5¾	2250	......	40	17x24	1x1¼ Bze.	60	....	....
40 Limousine......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Optional	200	5x5¼	2250	......	40	17x24	1x1¼ Bze.	60	....	....
50 Runabout......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Gar Wood	425	5x7	1950	1450	50	21x34	1x1⅜ Bze.	85	....	....
50 Limousine......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Gar Wood	425	5x7	1950	1450	48	21x34	1x1⅜ Bze.	85	....	....
55 Runabout......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Gar Wood	525	5x7	2200	1500	55	21x34	1x1⅜ Bze.	85	....	....
55 Limousine......	....	....	....	....	....	Batten	⅞x3 Apitong	241¾x4¼ Apitong	Side ½ Mah. Bot.Dbl.¾Ma.	Everdur Brs.-Bze.	Chr. Plated	Bronze	Gar Wood	525	5x7	2200	1500	53	21x34	1x1⅜ Bze.	85	....	....

Monel Metal Shafts

have given "entire satisfaction" in racing boats and sport cruisers



Super-express cruiser "Rascal" designed and built 1929 by Purdy Boat Co. for Mr. Caleb Bragg. Powered for 57 M. P. H. with two Packard 500 H. P. marine engines driving through a pair of Monel Metal shafts 1¾ in. dia. by 20 ft. long.



PURDY BOAT CO.
DESIGNERS AND BUILDERS
PORT WASHINGTON, L. I., N. Y.

October 23, 1929.

International Nickel Company,
67 Wall Street,
New York, N. Y.

Attention: Mr. L. Muller.-Thym

Gentlemen:

We have been using your Monel Metal shafting in our recent racing boats and fast cruisers and are very well pleased with the result. It has given entire satisfaction.

Very truly yours,
PURDY BOAT COMPANY, INC.

PER E. D. Purdy

EDP:L

1929 Winner of the President's Cup. Hydroplane "Imp" built by Purdy Boat Co., Port Washington, L. I. for Richard F. Hoyt. She is powered with a Wright Gold Cup Engine and a Monel Metal shaft 12 ft. by 1¾ inches, turning up to 3,000 R. P. M. and doing 60 miles per hour.

Monel Metal shafts increase the life of babbitt or bearing bronze and are especially recommended with Goodrich Cutless rubber bearings.

THE same properties that make Monel Metal so valuable for propeller shafts also make it the ideal metal for many other marine parts and fittings.

Monel Metal tiller rope is now widely used by leading boat builders because of its unfailing strength, its corrosion-resistance, and its remarkable dependability under the severe conditions of tiller rope service.

If you want information about Monel Metal for any marine use, write to The International Nickel Company, Inc.

INCo MONEL METAL

MONEL
METAL

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

INTRODUCING
THE MODERATE RATE
Into Modern Hotel Luxury

APPRECIATION is complete when you learn the extremely moderate rates at the Hotel Lexington. The luxury of its appointments, the perfection of its French cuisine, the convenience of its location leave nothing else to be desired.

Maitre Dave Bernie and his Lexington Minute Men Play at both Dinner and Supper. No Couvert at Dinner

801 ROOMS. Each with a private bath (tub and shower), circulating ice water, mirror door.

341 with double beds. 1 person $4, two___$5
229 with twin beds. Either 1 or 2 persons___$6
231 with twin beds. Either 1 or 2 persons___$7

HOTEL
LEXINGTON
LEXINGTON AVE. AT 48TH ST., NEW YORK CITY
Frank Gregson, Mgr. Phone MURray Hill 7401
Direction of American Hotels Corporation, J. Leslie Kincaid, President

EXOTIC HARD WOODS

(*Continued from page* 1-8)

original beauty is greatly enhanced. Some manufacturers of high grade furniture, musical instruments, boats, etc., label their product, Guaranteed Genuine Mahogany, so that the buyer is assured of getting a genuine article instead of a substitution or an imitation.

Africa, Central America, West Indies, Mexico, South America, Russia, Australia, India, Ceylon, Burma, Hawaii, the Andaman Islands, Europe and Japan are the principal countries producing the many different beautiful hardwoods that are now finding their place not only in all kinds of furniture, show windows and inside trim of our homes and commercial buildings, but the naval architect is specifying many beautiful woods to carry out a particular color scheme of decoration in the interiors of yachts, cruisers, etc.

AFRICA

African Mahogany, by reason of the large size of the trees, the great quantity available and the low labor costs in the country of production, is today the lowest priced of all mahoganies. It is extensively used in the boat building trades in Europe and in this country. Where long lengths and great widths are desired at a medium price in mahogany it is the cheapest and best. It is interesting to note that the Atlantic class of sloops recently imported from Germany are entirely planked inside and outside with this beautiful mahogany, and it was also used in the construction by Gar Wood of his famous speed boats, Miss America VII and VIII which captured the world's speed records.

Africa is still extremely rich in the production of not only mahogany but many other fine hardwoods that are being used as cabinet woods. Several other important species of cabinet woods from Africa are:

AVODIRE, which is a beautiful, light creamy colored wood and has the density of mahogany together with a very pretty figure. The crotches are particularly in demand for fine panel work. The tree produces logs 12 to 25 feet long and 30 to 60 inches in diameter.

BUBINGA is a hard dense wood and takes a fine finish. It is a rich rose color and has extremely good figure with broken stripe and beautiful mottle. The logs are 12 to 20 feet long and 30 to 50 inches square.

GABOON (OKOUME)—This tree grows in large quantities in the Belgian Congo district. It is used very extensively in Europe for cabinet work. It is lighter in weight than African mahogany, and while a little difficult to work, it is susceptible of a beautiful finish, stands well, contains a great deal of figured wood, and is also used very extensively in this country. The trees produce logs from 12 to 20 feet long, 24 to 50 inches in diameter. It produces beautifully figured veneers and is one of the cheapest foreign cabinet woods imported.

SAPELI. The color of this wood is slightly browner than African mahogany. Produces a narrow stripe figure when sawn on the quarter, is slightly heavier and harder than African mahogany. This wood is in great demand for cabinet work. It comes in excellent widths and lengths. It stands and finishes well.

TIGERWOOD (LOVEA-WOOD). The color of this wood is a tobacco brown but shows a decided stripe light and dark. It produces large size logs from which excellent sheets of veneer are secured. It is durable and many handsome floors have been laid of this wood. It wears well, finishes easily and retains its color. It has about the same density as mahogany.

ZEBRAWOOD OR ZINGANA. This tree grows in the Congo district of West Africa. It has a light creamy background which is broken with fine dark brown lines or stripes resembling the color marking of a zebra. The tree is large, squared logs measuring from 30 to 40 inches with a length of 12 to 20 feet. It works well, is durable and takes a high polish.

CENTRAL AMERICA AND MEXICO. Here again we find the King of cabinet woods—Mahogany—ranking first in quantity of cabinet woods produced. The methods employed for cutting these various woods are similar to those in Africa but as a result of the absence of the tsetse fly, wheel carts drawn by oxen and sometimes tractors have been used to supplement native labor.

CENTRAL AMERICAN MAHOGANY—The logs are usually imported in the round and will run from 18 to 36 inches in diameter, 12 to 30 feet long. The wood is a closer grained and slightly harder mahogany than African wood, and contains less figure. It is an easier working wood and slightly heavier and stronger. Its color is more of a golden brown as against reddish or pinkish brown of the African wood. It is used extensively in cabinet making, trim and boat building and is particularly well adapted for planking, where a straight grain, smooth clean growth lumber is desired, and it is slightly higher in cost than its African brother.

(*Continued on page* 478)

$745.00

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Model
HM-260
6 cylinder
3½ x 4½
Piston Displacement
260 cu. in.

See NEW SERIES BUDA MARINE ENGINES

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BLUEPRINTS - ESTIMATES - RUBBER BEARING SERVICE

EXOTIC HARD WOODS

(*Continued from page* 476)

CEDAR. Cedar from the Central American tropical forests is usually known as Spanish Cedar in the American trade. The wood is light in color, generally straight grained, light in weight and some of the logs show a mottle grain. The wood works very easily and stands exceedingly well when seasoned. The trees grow to a good height and produce large logs. Its principal use is in the cigar box industry but is also used for the construction of high grade boats and racing shells. In tropical countries it is used very largely in the construction of furniture as it resists the attack of the tropical ants.

PRIMA VERA. This wood is sometimes called incorrectly White Mahogany. The texture, grain and figure resemble true mahogany, but it has a cream color appearance very much like Satinwood. Many logs show figure with a mottled or rosy grain. Others contain a strongly marked splash mottle of the very best description. The wood stands well and takes a high finish. The average size of the log is somewhat under that of mahogany, and, therefore, sheets of veneer are smaller than that produced by the true mahogany log. The wood is very much in demand for cabinet work as well as interior trim for our American homes, commercial buildings and high grade yachts and cruisers. It is light in weight and softer than Mexican mahogany.

WEST INDIES

WEST INDIAN MAHOGANY. This is the hardest, heaviest, and closest textured of all of the mahoganies, and is susceptible of a finer finish. The size of the timber is much smaller than the African, Central American and Mexican Mahoganies. The logs coming to market run from 8 to 20 feet long and 10 to 20 inches square. It is considerably heavier than the African or Central American mahoganies and is particularly adapted for fine panelling and cabinet work where great strength is required. It is not a suitable wood for planking on account of its small size, weight and its higher cost.

SATINWOOD. The West Indies produce the very finest Satinwood both in quality and color. The log is small, averaging about 10 to 15 inches in diameter and approximately 8 to 14 feet long and produces a hard heavy wood which takes an excellent finish. The logs producing plainer grain are used mostly for sides, rails, stiles, moldings, etc., for cabinets, while the veneer of the beautiful figured logs is used in highly decorated furniture and panels. It is very scarce. The bulk of supplies now coming to our market is exported from San Domingo.

SABICU. This wood is of a rich brown color and has an exceedingly close, firm grain. A large proportion of this wood is very highly figured and is used quite extensively for fine cabinet work for which the exceeding smoothness of the grain makes it especially suitable. The logs have good average for length and range from 15 to 30 inches in diameter. Takes a beautiful finish, is very durable and it is a little harder than Cuban Mahogany.

SOUTH AMERICA

Here, as in the other tropical countries spoken of so far, mahogany reigns supreme. It is found mostly in Peru and Colombia. With the mahogany tree we also find many other fine cabinet woods.

GONCALO ALVES. This wood is comparatively new and is in great demand for inlay work on account of its decided light and dark stripes. The wood is of a straw color interspersed with streaks of dark reddish brown. It is hard, close grained, and has a very smooth surface and can be highly polished. The logs will range from 10 to 20 feet long, with an average diameter of about 20 inches. It is usually used for veneers. Very attractive designs have been worked out with the aid of this wood.

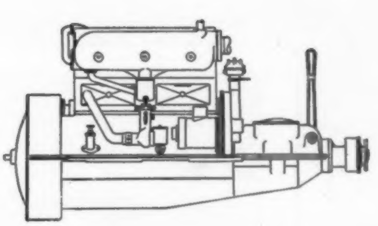
KING WOOD. This wood is sometimes known as Violet wood, no doubt on account of its peculiar color, shading sometimes almost to black and streaked with varying lighter and darker markings of golden yellow. It has a bright luster and a very smooth surface can be obtained. The beauty of this wood like mahogany increases with age. The logs are not very large, approximately 4 to 8 inches in diameter and the length will range from 3 to 6 feet. It turns very well, but the greatest demand has been for high grade furniture where the richness of tone and blending of colors are in great demand.

ROSEWOOD. This wood comes from Rio, Bahia and Victoria. The color of this wood will vary from a chocolate to something like a violet brown and will be streaked with black or darker colors. It is a very hard, heavy wood and has excellent cabinet qualities. The tree sometimes grows to a height of 125 feet or more and often three or four feet in diameter. This wood is well known to the furniture manufacturers and has a good reputation. Logs range from 15 to 24 inches in diameter, 10 to 15 feet long and have defective hearts.

Other woods that come from South America and which are being used extensively are Amarillo, Boxwood, Oleo Vermelho and Peroba.

(*Continued on page* 480)

The Start...
# of the adventure



THERE is a bit of the wanderlust in every true yachtsman. But that hunger for adventure does not extend to the power plant. The desire for an engine that always gives dependable performance instinctively leads to the choice of a Palmer Engine and Clutch in a standardized boat.

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ZR2—2-cylinder...18 h.p.
ZR3—3-cylinder...30 h.p.
ZR4—4-cylinder...40 h.p.
F2—2-cylinder...18 h.p.
F3—3-cylinder...25 h.p.
F4—4-cylinder...35 h.p.
F6—6-cylinder...50 h.p.
NK2—2-cylinder...25 h.p.
NK3—3-cylinder...35 h.p.
NK4—4-cylinder...50 h.p.
NK6—6-cylinder...80 h.p.
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plays an essential part among those appointments that today lend to the finest yachts their atmosphere of luxury. Its beauty, durability, resistance to seawater and weather makes it particularly adaptable for smaller craft also, wherever the best is demanded.

THE PANTASOTE COMPANY, Inc.

250 PARK AVENUE NEW YORK

EXOTIC HARD WOODS

(*Continued from page* 478)

AUSTRALIA

The principal wood from Australia that has been commercialized in this country is known as Oriental Wood but until lately was called a member of the walnut family. Recently many of the importers of this wood voluntarily agreed to call it Oriental Wood. It is not a walnut. This wood is being imported in very large quantities and considerable lumber and veneer is being used in the construction of, not only furniture and cabinets, but is extensively used for inside trim in commercial buildings. This tree grows in the northern part of Queensland in Australia more particularly on the high table lands of the Cairns district. The tree sometimes attains a height of 140 feet with a diameter at the base of approximately 9 feet. The grain when cut on the quarter produces a fiddle back or mottle, and many times finger roll markings as well as a decided stripe.

Other woods coming from Australia are Black Bean, Jarrah, Lacewood, Yuba wood, Rosemay and Warri wood.

From Tasmania we get Blackwood.

INDIA, CEYLON AND ANDAMAN ISLANDS

In these tropical forests we find the method of transportation different from the other countries that we have just passed over. Elephants are used in the transportation of logs, hauling, lifting and piling the heavy timbers. There are many beautiful hardwoods used in these forests. We find the following:

PADOUK (VERMILION WOOD). The best qualities of this wood come from the Andaman Islands. The logs are very large in size, ranging from 18 to 40 inches in diameter and from 8 to 20 feet long. The color varies from a pale yellow to a cherry red, sometimes pink and reddish brown. It is a hard, firm textured wood, and takes a very high polish. Much of this wood is finding its way into our furniture, paneling, and inside trim of many of our large public buildings as well as private homes and yachts, cruisers, etc.

KOKO. This wood also comes from the Andaman Islands. It is a hard, dense, close grained wood of a dark brown color, sometimes having black and golden streaks. It usually has a curly or wavy grain which gives a very beautiful figure. The logs are quite large, running from 12 to 30 inches in diameter and 8 to 20 feet long. It works easily, polishes well and is very durable. While it is used in furniture there is a very large demand for this wood for flooring and trim for high grade yachts, cruisers, etc.

ROSEWOOD. This wood is well known to the furniture manufacturers of America, especially for high grade panel and inlay work. It stands well under all conditions and gives a very high polish. The color ranges from a light red to a deep rich purple and is streaked with every shade from golden yellow to almost black. Rosewood gives a very handsome appearance when used for parquet floors. The logs range from 18 to 36 inches in diameter and 8 to 18 feet long.

SATINWOOD. The East Indian Satinwood, commercially speaking, is obtained only from Ceylon. The logs will range from 12 to 30 inches in diameter, and in length from 8 to 20 feet. The logs are used mostly for veneer, but there is considerable solid wood produced for the furniture trade. The wood is hard, heavv and of uniform texture. The color is a bright golden yellow, and many of the logs produce a highly figured veneer.

TEAK. The method of logging teak in Burma is somewhat different than the general logging in other countries. First, the trees are girdled, that is, a deep ring is cut completely around the tree to the heart wood about three years before it is intended to be cut. This causes the tree to die and makes the wood lighter in weight. If this precaution is not taken the logs will not float, and like other woods the territory producing the teak wood is getting further and further into the depths of the jungle, therefore, the logs must be rafted and floated down the rivers hundreds of miles to the sea.

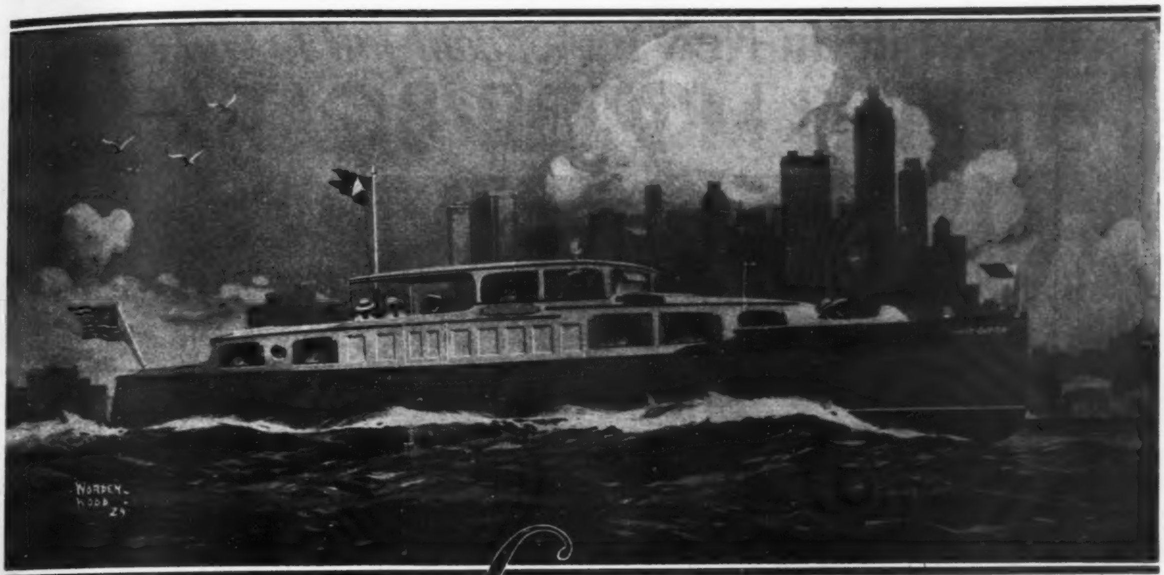
The wood is hard, moderately heavy, and in color is a very rich tobacco brown and when finished it retains this color. The wood contains a resin or oil, which retards decay, making it most suitable for shipbuilding and outside or weather exposed woodwork. It is very popular for interior trim work, also for making furniture and fine paneling. It is susceptible to any kind of finish. A very small percentage of this wood reaching our markets produces a figured wood suitable for veneer. One of the finest and largest banks in New York City, the Chemical Bank and Trust Co., is entirely paneled in figured teak and is one of the beautiful examples of the soft brown color obtainable with real teakwood. It is imported in logs, flitches and planks.

Other woods coming from this section of the globe are Macassar or Golden Ebony, Laurel and Sissoo.

EUROPE

The conditions for logging in European countries are similar to those in our own country, but the scarcity of the choice rare

(*Continued on page* 482)



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It's the PLUS in a boat which ✢ identifies a ✢ LUDERSHIP!

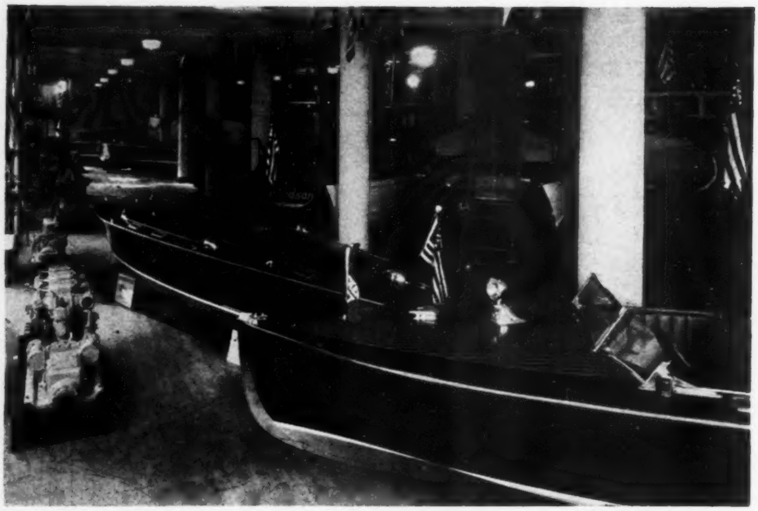
THIS new 45-foot express cabin runabout has that PLUS which identifies a Ludership. It expresses the same high standards of design and advanced principles of construction that have made the Luders 72-footer the most popular commuter afloat. Not built to meet market prices, but expressly created to provide individualized custom characteristics from a successful standardized design—an ideal combination of commuter and day cruiser.

See her at the New York Show. See her later in the season about the smart yacht clubs as a feature in the entertainment program of the entire family. See her off your own waterfront flying your private signal.

She offers her owners and guests the seaworthiness of a modified "V" bottom boat, a sporty forward cockpit, a luxurious sheltered cabin of utmost comfort, the dependability of a twin screw installation, with a cruising speed of better than 25 miles an hour. And whether ably forging ahead in heavy weather, or resting quietly at anchor in an inviting harbor, her grace of line and beauty of finish will make you proud to own this latest Ludership.

To those unable to visit the New York Show and inspect this craft, we shall be glad to supply detailed information.

LUDERS MARINE CONSTRUCTION CO. STAMFORD - - CONN.



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HEAVY DUTY DIESEL ENGINES

(*Continued from page* 132)

tegral unit driven off the forward end of the engine, all parts fully enclosed and forced feed lubricated, same as the engine. These important auxiliaries are most substantial and do not have the appearance of having been stuck on at the last minute. All these parts are built by Fulton and form a part of the original design.

The Model L is built in 2, 3, 4, 5, 6, and 8 cylinders, developing 33 h.p. per cylinder at 600 r.p.m., or 38.5 h.p. at 700 r.p.m. The bore and stroke are 8½ by 11 inches rating at only 70 lbs. M.E.P.

In the larger marine engines, Model RR is offered at speeds from 275 to 325 r.p.m., being built in 3 to 8-cylinder models, developing 60 h.p. per cylinder at 300 r.p.m. based on 70 lbs. M.E.P.

This model was brought out to supply the need for an unusually rugged long-lived engine, of the heavy-duty type, but operating as smoothly and quietly, and as free from vibration, as a much smaller engine, thus making it suitable for yacht service.

Although not inclosed to the extent of the Model L, considerable care has been taken in the engineering of the Model RR to have it operate with the maximum of cleanliness.

The direct-reversing mechanism of the Model RR is most interesting and simple in operation, requiring only two small, manually-operated levers to perform the operation of reversing and throttle control.

The cam is not shifted, as is the usual practice but, instead, an alternate roller at the end of the intake and exhaust rocker arms is engaged, there being no rocker arm on the injector.

Model RR, in its initial tests, has established some unusual performance records in the matter of close governing. Fuel and lubricating oil economy and the engine as a whole show a very high mechanical efficiency.

All Fulton-Diesel engines are built to a very high standard of material and workmanship, and, in addition, present a very handsome appearance and one in which the owner, as well as Fulton, can take great pride.

EXOTIC HARD WOODS

(*Continued from page* 480)

woods makes it very difficult for the American importer to secure supplies to equal the demands for the critical American consumer. The forests of Europe are fast becoming depleted of choice timbers for cabinet work. Among the species that are in greatest demand is:

BROWN OAK. The color of the English Brown Oak that is so much in demand in this country, resembles a highly polished crocodile leather, very variable in character, depth and richness. The warm mellow brown is sometimes spotted and streaked with darker colors and presents a rich appearance. While many of the brown oak logs are quite defective there are still produced excellent sheets of veneer showing a wonderful figure. The wood has a firm dense texture and is easily worked. The trees generally are large, 30 to 60 inches in diameter, and very old. Brown oaks are found, now and then, on the larger estates or in parks. They are very scarce and difficult to get, most of the English Oak being White Oak.

We also find that the following woods are very much in demand: Slavonian Oak, French Oak, Pearwood, English Sycamore (which when stained a silver gray is known ar Harewood), Circassian Walnut, English Walnut, French Walnut, Italian Walnut, Spanish Walnut and Turkish Walnut.

NORTH STAR A NEW RUNABOUT

Another runabout is offered to the boating public by the North Star Marine Construction Company of Holland, Michigan. It is a 22-footer, known as the North Star, and was designed by Gordon B. Hooton, designer and manufacturer of a complete line of outboard hulls.

The new craft was designed with a view toward making her a most substantial boat, with horsepower enough to make her capable of planing easily even with a full load. This is effected with a six cylinder 62 h.p. Continental marine motor, which produces a speed of 28 m.p.h.

The North Star has a generous beam of six feet with a carrying capacity of nine passengers. Modern in all its departments, it is an unusual craft in all particulars—speed, comfort, appearance, structural quality and handling ease—in short, such a boat as any owner might be proud to claim.

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Titeflex is All-Metal.

Titeflex Absorbs Vibration.

Titeflex Eliminates Broken Fuel Lines.

Titeflex Being Flexible is Easy to Install.

Titeflex is Supplied With Standard S. A. E. Fittings.

Titeflex is Used for Fuel Lines on Test Racks by Engine Manufacturers.

Titeflex is Tight for Carrying Gasoline, Oil and Water Under Pressure.

In addition to fuel line installations on outboard motors and motor boats, Titeflex because of its all-metal construction is tight for the carrying of all liquids and gases under pressure. We can serve you for plant equipment, industrial applications or wherever flexible tubing is required.

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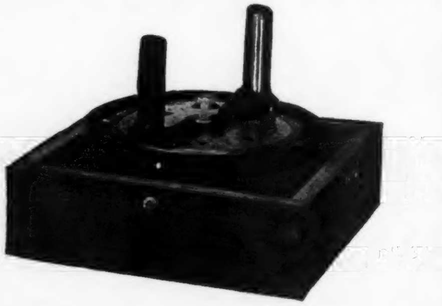

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A PRECISION instrument for taking bearings of the sun, stars, or land objects, and for determining compass errors. Dial 4½ inches, graduated in degrees 0 to 360. $26.50

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Catalog mailed upon request.

Space 99—New York Motor Boat Show

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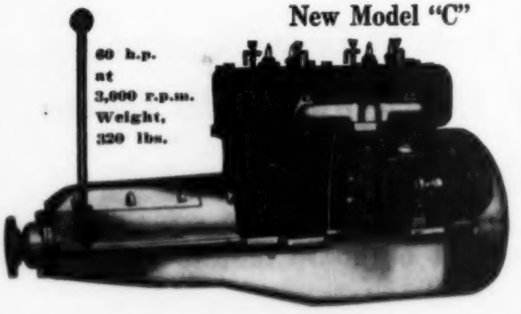

For fast Runabouts. Equipped with built-in Oil Cooler. A down-draft carburetor is supplied where extreme high speed is required.

Ask us about our Model "OX," 50 H.P. for cruisers, workboats or pleasure boats; our Model "AS," 40 H. P. for medium duty service;

THE NEWEST 43-FOOTER

(*Continued from page* 113)

bridge deck, forty-three footer, twin-screw powered with six-cylinder Scripps engines. In the design of this boat, which provides many unusual features, Mr. Kyle has embodied the best and most practical ideas sifted from comments, suggestions and criticisms of thousands of yachtsmen with whom he has come in contact during the past five years. Some of these features are construction details, others relate to arrangement of living quarters, while some concern dimensions. The owner's stateroom has a large double berth in addition to upper and lower berths, dresser and full length clothes locker. The after cabin sleeps four and has its own lavatory. For fishing or for acquiring sun tan there is a roomy self-bailing after cockpit. The galley, as on all cruisers which Mr. Kyle produced, is large and fully equipped.

Production schedule is planned for twenty of these cruisers for 1930.

CHICAGO'S MOTOR BOAT MART

(*Continued from page* 149)

splendid yacht clubs. North of the pier is protected water. Long government breakwaters provide shelter for yachts during storms and protect the Navy Pier itself.

On the lower deck, beneath the Mart, the pier teems with activity as the lake liners take on and discharge their passengers and freight for all ports on the Great Lakes, as far east as Buffalo, New York. The maritime flavor is there, and many thousands of people daily pass through the pier for embarkation. The outer end of the pier's lower deck is a great recreation center, with a dance hall, band concerts and varied amusements for the throngs who go there to enjoy the fresh and stimulating breezes over the lake.

The manager of the Mart, whose tenacious belief in the idea has overriden the obstacles to its success, is Hubbard H. Erickson. He is well known to the trade as the manufacturer of the Erico (Hubbard H. Erickson & Co.) line of equipment, now a part of the consolidated Erico-Kainer line. He frankly states his belief that the success of the Motor Boat Mart idea, through the cooperation and for the profit of the whole industry, will mark an epoch in the industry's development by its stimulation of public interest and provision for security of market and economy of marketing. He says the Mart has developed into something bigger than any one man's idea by natural growth from a fundamental smaller conception which was thoroughly sound. To sell boats, engines and accessories they must be shown. The market is there, crying for intelligent development. The public wants boats, but often does not know it, or if it does, does not know which boat. There is a boat for every taste and use, and there is a use and taste for every boat. "I want a boat," says the individual, "but what boat shall I buy?"

SPEED AND POWER GOING UP

(*Continued from page* 124)

and compression, Models 120 and 124 are of practically identical design and are both developments of the Model F-6 which is continued in the line at a somewhat lesser price. Both Models 120 and 124 are equipped with a Holley down draft carburetor to which fuel is fed by an inbuilt self-priming Barlow roller fuel pump. The Model 124, it should be remembered, is one of the five American motors which have been approved for the new 5½ liter international class and is distinctly a high speed affair developing its rated 135 h.p. at 3000 r.p.m. The Model 120 develops 100 h.p. in the neighborhood of 2000 r.p.m.

Although down draft carburetion in itself practically eliminates all fire hazard from possible back-firing, all of the larger models are now fitted with a very ingenious type of flame arrester developed by Scripps engineers in cooperation with the Protectoseal Company. The element of this device contains no fine mesh screens, metallic wool or similar materials, but is made up of a

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ENJOYING quick access to the smart shops, leading theaters and the financial section, you will occupy a key position in downtown Detroit as a guest of Hotel Fort Shelby. This 22-story hotel, preeminent in Detroit, has 900 luxuriously-furnished, Servidor-equipped guest rooms, providing convenience with privacy and quietude.

For your selection, there are many pleasant rooms overlooking the city, or the river and Canadian shore, at $3, $3.50, $4—and larger rooms or suites with still more luxurious accommodations. Advance reservations are made for theaters, concerts and sporting events. Write, and we will forward full information and motor route direct to the door.

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J. E. FRAWLEY
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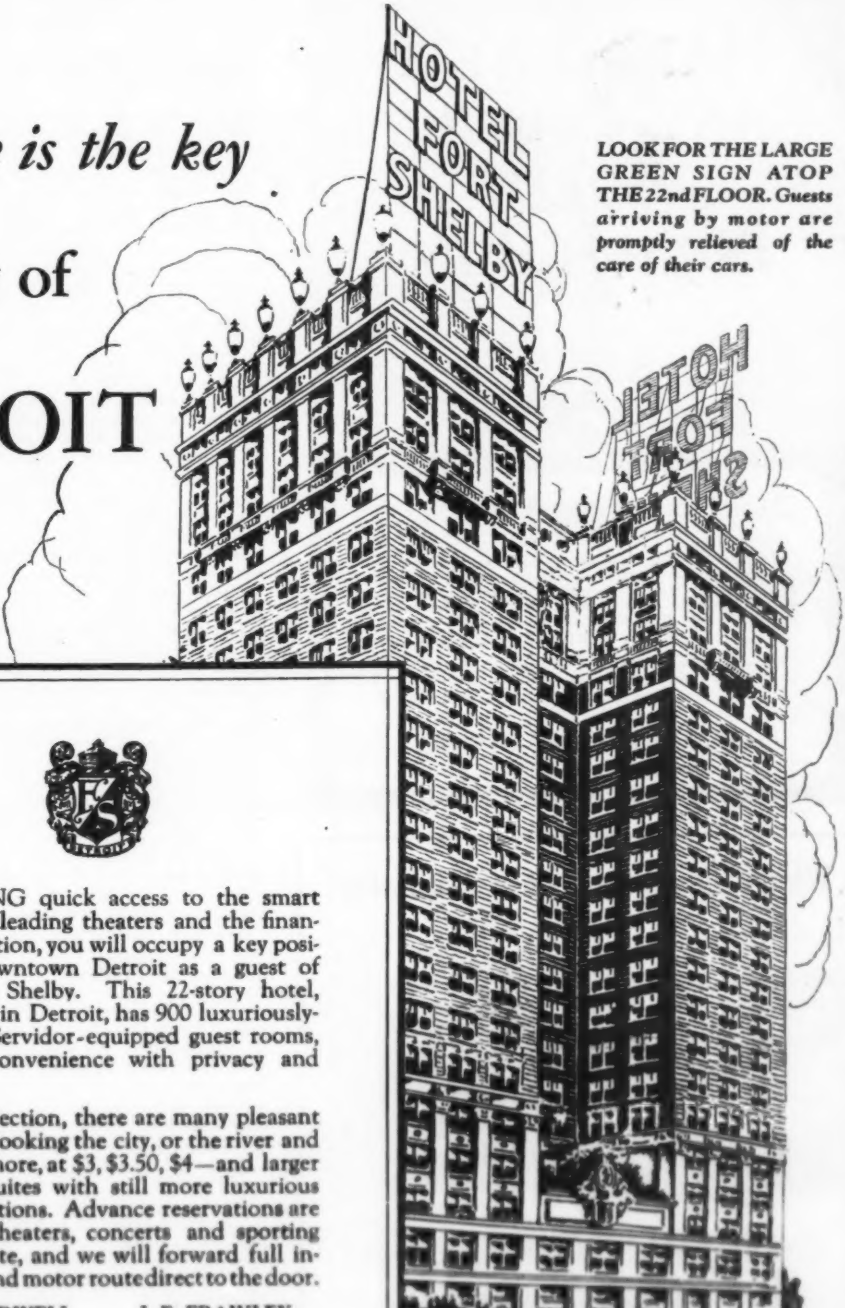
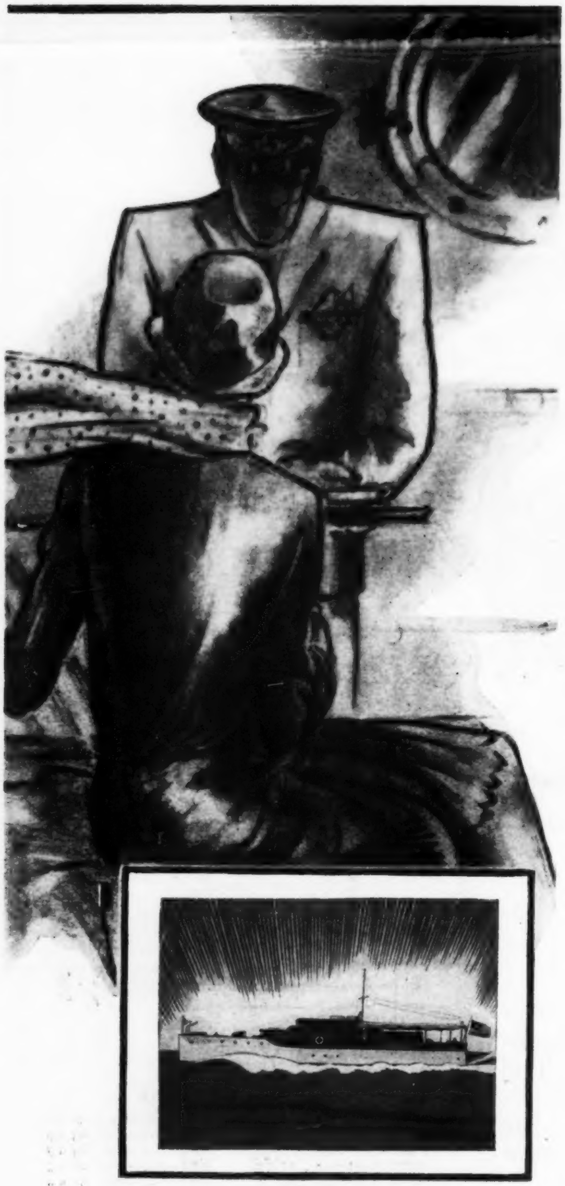




RUSSIALOID

upholstery material

plays an essential part among those appointments that today lend to the finest yachts their atmosphere of luxury. Its beauty, durability, resistance to seawater and weather makes it particularly adaptable for smaller craft also, wherever the best is demanded.

THE PANTASOTE COMPANY, Inc.

250 PARK AVENUE NEW YORK

EXOTIC HARD WOODS

(*Continued from page 478*)

AUSTRALIA

The principal wood from Australia that has been commercialized in this country is known as Oriental Wood but until lately was called a member of the walnut family. Recently many of the importers of this wood voluntarily agreed to call it Oriental Wood. It is not a walnut. This wood is being imported in very large quantities and considerable lumber and veneer is being used in the construction of, not only furniture and cabinets, but is extensively used for inside trim in commercial buildings. This tree grows in the northern part of Queensland in Australia more particularly on the high table lands of the Cairns district. The tree sometimes attains a height of 140 feet with a diameter at the base of approximately 9 feet. The grain when cut on the quarter produces a fiddle back or mottle, and many times finger roll markings as well as a decided stripe.

Other woods coming from Australia are Black Bean, Jarrah, Lacewood, Yuba wood, Rosemay and Warri wood.

From Tasmania we get Blackwood.

INDIA, CEYLON AND ANDAMAN ISLANDS

In these tropical forests we find the method of transportation different from the other countries that we have just passed over. Elephants are used in the transportation of logs, hauling, lifting and piling the heavy timbers. There are many beautiful hardwoods used in these forests. We find the following:

PADOUK (VERMILION WOOD). The best qualities of this wood come from the Andaman Islands. The logs are very large in size, ranging from 18 to 40 inches in diameter and from 8 to 20 feet long. The color varies from a pale yellow to a cherry red, sometimes pink and reddish brown. It is a hard, firm textured wood, and takes a very high polish. Much of this wood is finding its way into our furniture, paneling, and inside trim of many of our large public buildings as well as private homes and yachts, cruisers, etc.

KOKO. This wood also comes from the Andaman Islands. It is a hard, dense, close grained wood of a dark brown color, sometimes having black and golden streaks. It usually has a curly or wavy grain which gives a very beautiful figure. The logs are quite large, running from 12 to 30 inches in diameter and 8 to 20 feet long. It works easily, polishes well and is very durable. While it is used in furniture there is a very large demand for this wood for flooring and trim for high grade yachts, cruisers, etc.

ROSEWOOD. This wood is well known to the furniture manufacturers of America, especially for high grade panel and inlay work. It stands well under all conditions and gives a very high polish. The color ranges from a light red to a deep rich purple and is streaked with every shade from golden yellow to almost black. Rosewood gives a very handsome appearance when used for parquet floors. The logs range from 18 to 36 inches in diameter and 8 to 18 feet long.

SATINWOOD. The East Indian Satinwood, commercially speaking, is obtained only from Ceylon. The logs will range from 12 to 30 inches in diameter, and in length from 8 to 20 feet. The logs are used mostly for veneer, but there is considerable solid wood produced for the furniture trade. The wood is hard, heavy and of uniform texture. The color is a bright golden yellow, and many of the logs produce a highly figured veneer.

TEAK. The method of logging teak in Burma is somewhat different than the general logging in other countries. First, the trees are girdled, that is, a deep ring is cut completely around the tree to the heart wood about three years before it is intended to be cut. This causes the tree to die and makes the wood lighter in weight. If this precaution is not taken the logs will not float, and like other woods the territory producing the teak wood is getting further and further into the depths of the jungle, therefore, the logs must be rafted and floated down the rivers hundreds of miles to the sea.

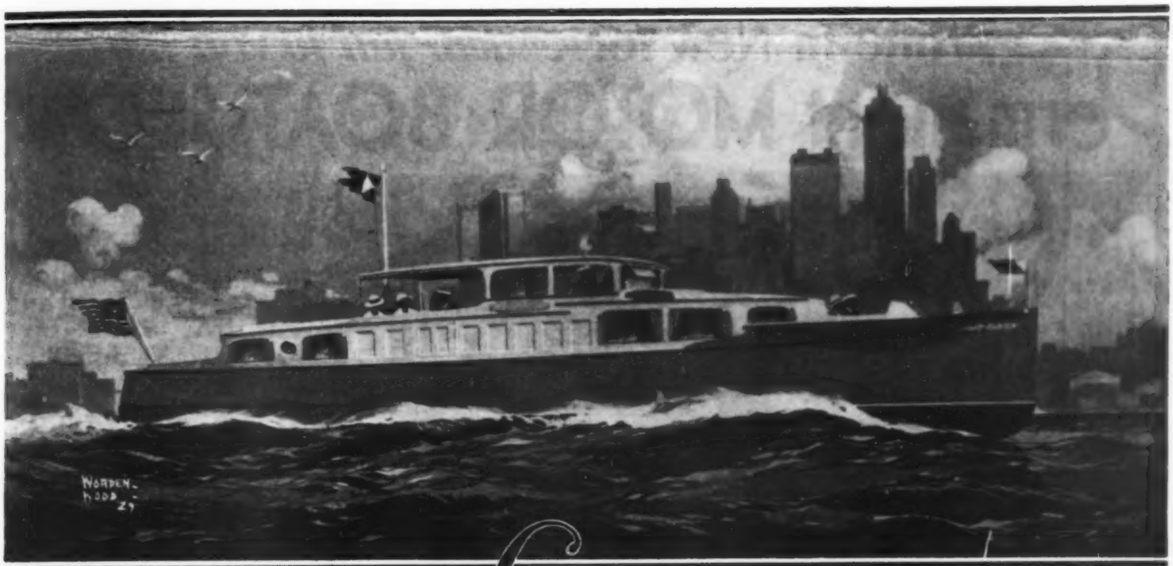
The wood is hard, moderately heavy, and in color is a very rich tobacco brown and when finished it retains this color. The wood contains a resin or oil, which retards decay, making it most suitable for shipbuilding and outside or weather exposed woodwork. It is very popular for interior trim work, also for making furniture and fine paneling. It is susceptible to any kind of finish. A very small percentage of this wood reaching our markets produces a figured wood suitable for veneer. One of the finest and largest banks in New York City, the Chemical Bank and Trust Co., is entirely paneled in figured teak and is one of the beautiful examples of the soft brown color obtainable with real teakwood. It is imported in logs, flitches and planks.

Other woods coming from this section of the globe are Macassar or Golden Ebony, Laurel and Sissoo.

EUROPE

The conditions for logging in European countries are similar to those in our own country, but the scarcity of the choice rare

(*Continued on page 482*)



LUDERSHIP / means LEADERSHIP!

THIS new 45-foot express cabin runabout has that PLUS which identifies a Ludership. It expresses the same high standards of design and advanced principles of construction that have made the Luders 72-footer the most popular commuter afloat. Not built to meet market prices, but expressly created to provide individualized custom characteristics from a successful standardized design—an ideal combination of commuter and day cruiser.

It's the PLUS in a boat which ✦ identifies a ✦ LUDERSHIP!

See her at the New York Show. See her later in the season about the smart yacht clubs as a feature in the entertainment program of the entire family. See her off your own waterfront flying your private signal.

She offers her owners and guests the seaworthiness of a modified "V" bottom boat, a sporty forward cockpit, a luxurious sheltered cabin of utmost comfort, the dependability of a twin screw installation, with a cruising speed of better than 25 miles an hour. And whether ably forging ahead in heavy weather, or resting quietly at anchor in an inviting harbor, her grace of line and beauty of finish will make you proud to own this latest Ludership.

To those unable to visit the New York Show and inspect this craft, we shall be glad to supply detailed information.

LUDERS MARINE CONSTRUCTION CO. STAMFORD - - CONN.

While in New York—*don't fail to visit the*

Permanent MOTOR BOAT SHOW

HERE in the largest display room in the industry you may select at your leisure and without the annoyance of jostling crowds the boat best suited to your individual requirements.

MATTHEWS CRUISERS
38′ and 46′—$6850 and up

RICHARDSON CRUISERS
Single and Double Cabin
$3585 Single—$4185 Double

HACKER RUNABOUTS
24′ to 38′—$3150 and up

STERLING ENGINES
12 to 565 H.P.

KERMATH ENGINES
3 to 200 H.P.

Guaranteed rebuilt engines of all makes and sizes

Bruns, Kimball & Co., Inc.
Fifth Avenue, Cor. 15th St., New York Tel. Algonquin 0800
Open evenings by appointment. Time payments if desired.

HEAVY DUTY DIESEL ENGINES

(*Continued from page* 132)

tegral unit driven off the forward end of the engine, all parts fully enclosed and forced feed lubricated, same as the engine.

These important auxiliaries are most substantial and do not have the appearance of having been stuck on at the last minute.

All these parts are built by Fulton and form a part of the original design.

The Model L is built in 2, 3, 4, 5, 6, and 8 cylinders, developing 33 h.p. per cylinder at 600 r.p.m., or 38.5 h.p. at 700 r.p.m. The bore and stroke are 8½ by 11 inches rating at only 70 lbs. M.E.P.

In the larger marine engines, Model RR is offered at speeds from 275 to 325 r.p.m., being built in 3 to 8-cylinder models, developing 60 h.p. per cylinder at 300 r.p.m. based on 70 lbs. M.E.P.

This model was brought out to supply the need for an unusually rugged long-lived engine, of the heavy-duty type, but operating as smoothly and quietly, and as free from vibration, as a much smaller engine, thus making it suitable for yacht service.

Although not inclosed to the extent of the Model L, considerable care has been taken in the engineering of the Model RR to have it operate with the maximum of cleanliness.

The direct-reversing mechanism of the Model RR is most interesting and simple in operation, requiring only two small, manually-operated levers to perform the operation of reversing and throttle control.

The cam is not shifted, as is the usual practice but, instead, an alternate roller at the end of the intake and exhaust rocker arms is engaged, there being no rocker arm on the injector.

Model RR, in its initial tests, has established some unusual performance records in the matter of close governing. Fuel and lubricating oil economy and the engine as a whole show a very high mechanical efficiency.

All Fulton-Diesel engines are built to a very high standard of material and workmanship, and, in addition, present a very handsome appearance and one in which the owner, as well as Fulton, can take great pride.

EXOTIC HARD WOODS

(*Continued from page* 480)

woods makes it very difficult for the American importer to secure supplies to equal the demands for the critical American consumer. The forests of Europe are fast becoming depleted of choice timbers for cabinet work. Among the species that are in greatest demand is:

BROWN OAK. The color of the English Brown Oak that is so much in demand in this country, resembles a highly polished crocodile leather, very variable in character, depth and richness. The warm mellow brown is sometimes spotted and streaked with darker colors and presents a rich appearance. While many of the brown oak logs are quite defective there are still produced excellent sheets of veneer showing a wonderful figure. The wood has a firm dense texture and is easily worked. The trees generally are large, 30 to 60 inches in diameter, and very old. Brown oaks are found, now and then, on the larger estates or in parks. They are very scarce and difficult to get, most of the English Oak being White Oak.

We also find that the following woods are very much in demand: Slavonian Oak, French Oak, Pearwood, English Sycamore (which when stained a silver gray is known ar Harewood), Circassian Walnut, English Walnut, French Walnut, Italian Walnut, Spanish Walnut and Turkish Walnut.

NORTH STAR A NEW RUNABOUT

Another runabout is offered to the boating public by the North Star Marine Construction Company of Holland, Michigan. It is a 22-footer, known as the North Star, and was designed by Gordon B. Hooton, designer and manufacturer of a complete line of outboard hulls.

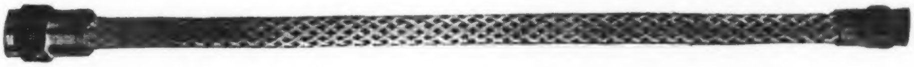
The new craft was designed with a view toward making her a most substantial boat, with horsepower enough to make her capable of planing easily even with a full load. This is effected with a six cylinder 62 h.p. Continental marine motor, which produces a speed of 28 m.p.h.

The North Star has a generous beam of six feet with a carrying capacity of nine passengers. Modern in all its departments, it is an unusual craft in all particulars—speed, comfort, appearance, structural quality and handling ease—in short, such a boat as any owner might be proud to claim.

Tite flex
REG. U.S. PAT. OFF.

AN ALL-METAL FLEXIBLE TUBING THAT IS USED BY BOAT BUILDERS, DEALERS, DISTRIBUTORS AND OWNERS FOR GAS AND OIL FUEL LINES

Titeflex is All-Metal.
Titeflex Absorbs Vibration.
Titeflex Eliminates Broken Fuel Lines.
Titeflex Being Flexible is Easy to Install.
Titeflex is Supplied With Standard S. A. E. Fittings.
Titeflex is Used for Fuel Lines on Test Racks by Engine Manufacturers.
Titeflex is Tight for Carrying Gasoline, Oil and Water Under Pressure.

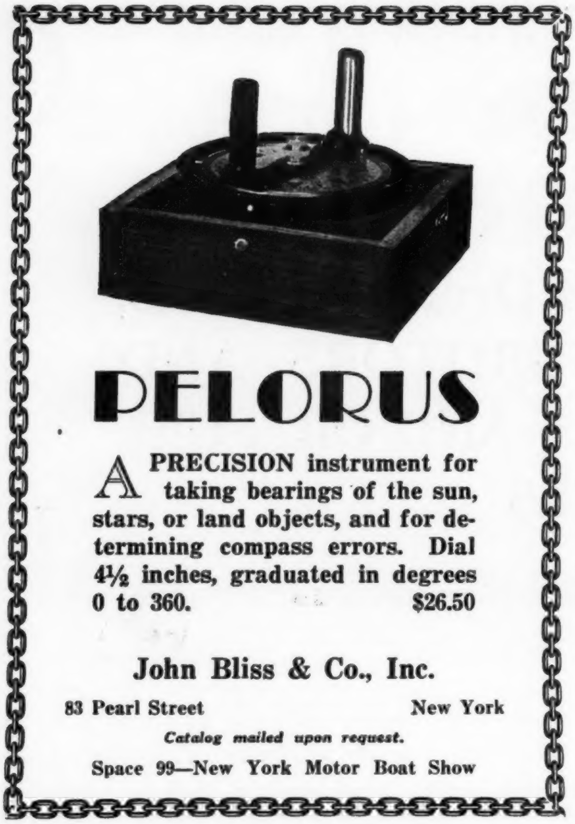


In addition to fuel line installations on outboard motors and motor boats, Titeflex because of its all-metal construction is tight for the carrying of all liquids and gases under pressure. We can serve you for plant equipment, industrial applications or wherever flexible tubing is required.

Complete Catalogue Sent on Request

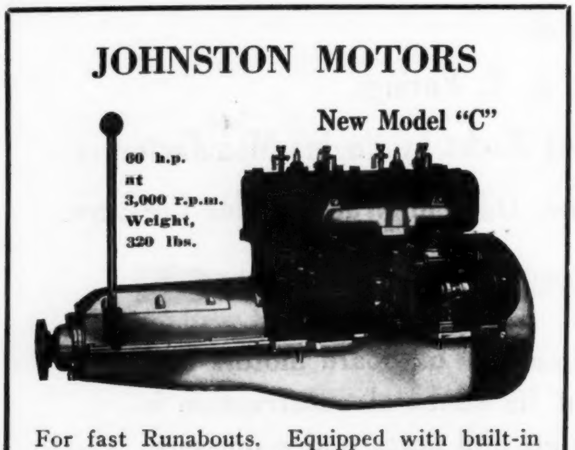
TITEFLEX METAL HOSE CO.

500 Frelinghuysen Ave. Newark, N. J.


PELORUS

A PRECISION instrument for taking bearings of the sun, stars, or land objects, and for determining compass errors. Dial 4½ inches, graduated in degrees 0 to 360. $26.50

John Bliss & Co., Inc.
83 Pearl Street New York
Catalog mailed upon request.
Space 99—New York Motor Boat Show


JOHNSTON MOTORS
New Model "C"

For fast Runabouts. Equipped with built-in Oil Cooler. A down-draft carburetor is supplied where extreme high speed is required.

Ask us about our Model "OX," 50 H.P. for cruisers, workboats or pleasure boats; our Model "AS," 40 H. P. for medium duty service; and our Model "J," 16 H. P. for general purposes, where small power is required—the lowest priced engine in America.

Write at once for details

ROBERTS MOTORS •• Sandusky, Ohio
Manufacturers of marine motors for 22 years from 10 H.P. upward

THE NEWEST 43-FOOTER

(*Continued from page* 113)

bridge deck, forty-three footer, twin-screw powered with six-cylinder Scripps engines. In the design of this boat, which provides many unusual features, Mr. Kyle has embodied the best and most practical ideas sifted from comments, suggestions and criticisms of thousands of yachtsmen with whom he has come in contact during the past five years. Some of these features are construction details, others relate to arrangement of living quarters, while some concern dimensions. The owner's stateroom has a large double berth in addition to upper and lower berths, dresser and full length clothes locker. The after cabin sleeps four and has its own lavatory. For fishing or for acquiring sun tan there is a roomy self-bailing after cockpit. The galley, as on all cruisers which Mr. Kyle produced, is large and fully equipped.

Production schedule is planned for twenty of these cruisers for 1930.

CHICAGO'S MOTOR BOAT MART

(*Continued from page* 149)

splendid yacht clubs. North of the pier is protected water. Long government breakwaters provide shelter for yachts during storms and protect the Navy Pier itself.

On the lower deck, beneath the Mart, the pier teems with activity as the lake liners take on and discharge their passengers and freight for all ports on the Great Lakes, as far east as Buffalo, New York. The maritime flavor is there, and many thousands of people daily pass through the pier for embarkation. The outer end of the pier's lower deck is a great recreation center, with a dance hall, band concerts and varied amusements for the throngs who go there to enjoy the fresh and stimulating breezes over the lake.

The manager of the Mart, whose tenacious belief in the idea has overriden the obstacles to its success, is Hubbard H. Erickson. He is well known to the trade as the manufacturer of the Erico (Hubbard H. Erickson & Co.) line of equipment, now a part of the consolidated Erico-Kainer line. He frankly states his belief that the success of the Motor Boat Mart idea, through the cooperation and for the profit of the whole industry, will mark an epoch in the industry's development by its stimulation of public interest and provision for security of market and economy of marketing. He says the Mart has developed into something bigger than any one man's idea by natural growth from a fundamental smaller conception which was thoroughly sound. To sell boats, engines and accessories they must be shown. The market is there, crying for intelligent development. The public wants boats, but often does not know it, or if it does, does not know which boat. There is a boat for every taste and use, and there is a use and taste for every boat. "I want a boat," says the individual, "but what boat shall I buy?"

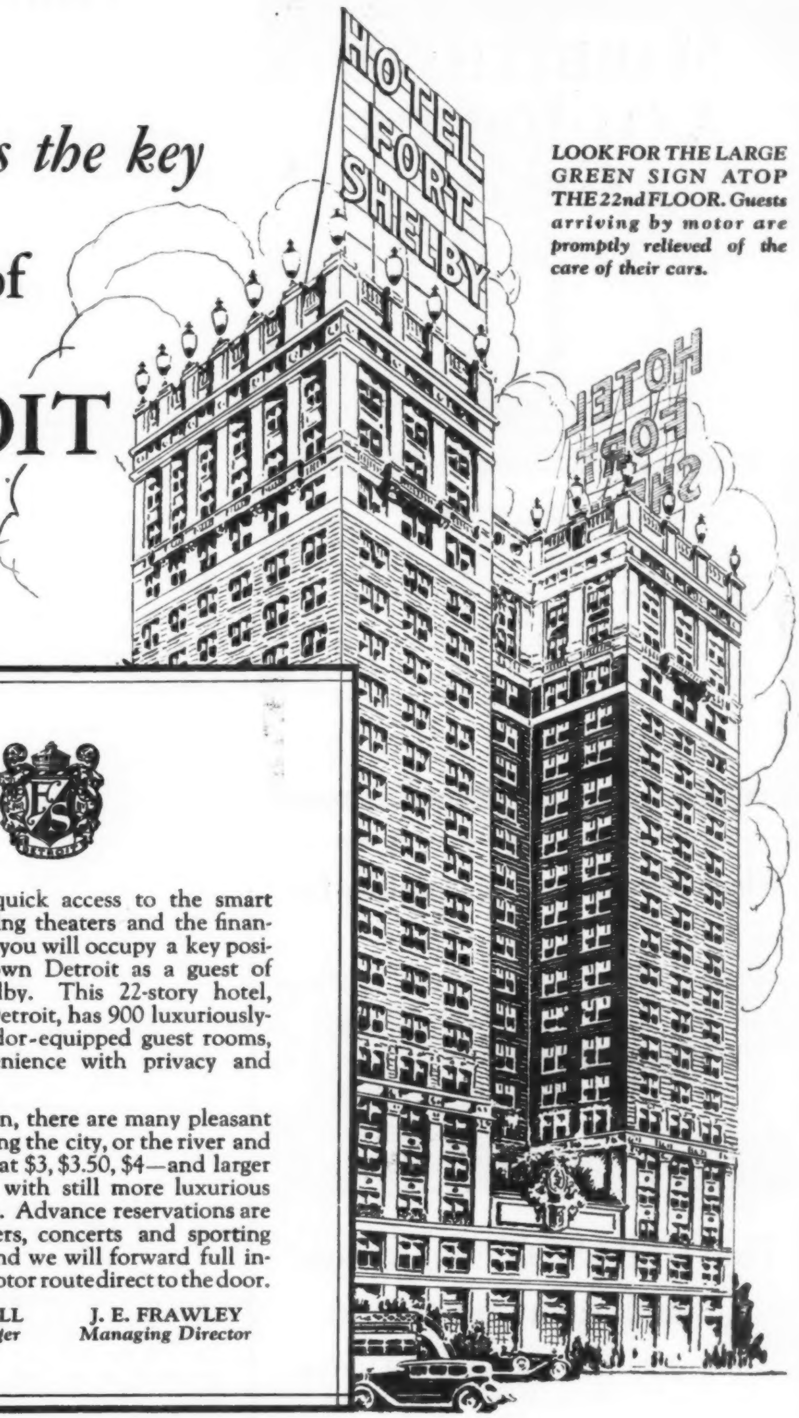
SPEED AND POWER GOING UP

(*Continued from page* 124)

and compression, Models 120 and 124 are of practically identical design and are both developments of the Model F-6 which is continued in the line at a somewhat lesser price. Both Models 120 and 124 are equipped with a Holley down draft carbureter to which fuel is fed by an inbuilt self-priming Barlow roller fuel pump. The Model 124, it should be remembered, is one of the five American motors which have been approved for the new 5½ liter international class and is distinctly a high speed affair developing its rated 135 h.p. at 3000 r.p.m. The Model 120 develops 100 h.p. in the neighborhood of 2000 r.p.m.

Although down draft carburetion in itself practically eliminates all fire harard from possible back-firing, all of the larger models are now fitted with a very ingenious type of flame arrester developed by Scripps engineers in cooperation with the Protectoseal Company. The element of this device contains no fine mesh screens, metallic wool or similar materials, but is made up of a series of substantial stamped aluminum plates assembled in grid fashion in such a way as to take up very little space and at the same time effectively arrest all flame. The device is such that it should never foul from dirt or oil but if cleansing should ever be necessary it can be readily removed and thoroughly cleansed by dipping in gasoline. Aside from its flame arresting qualities the Protectoseal arrester has the peculiar effect of muffling the air intake eliminating almost entirely the suction noise that is usually apparent as the throttle is opened. Some slight revisions have been made in the lubrication system which not only render it more effective but further reduce the oil consumption to a most economical point.

And here is the key to the city of DETROIT



LOOK FOR THE LARGE GREEN SIGN ATOP THE 22nd FLOOR. ***Guests arriving by motor are promptly relieved of the care of their cars.***

ENJOYING quick access to the smart shops, leading theaters and the financial section, you will occupy a key position in downtown Detroit as a guest of Hotel Fort Shelby. This 22-story hotel, preeminent in Detroit, has 900 luxuriously-furnished, Servidor-equipped guest rooms, providing convenience with privacy and quietude.

For your selection, there are many pleasant rooms overlooking the city, or the river and Canadian shore, at $3, $3.50, $4—and larger rooms or suites with still more luxurious accommodations. Advance reservations are made for theaters, concerts and sporting events. Write, and we will forward full information and motor route direct to the door.

E. J. BRADWELL
Resident Manager

J. E. FRAWLEY
Managing Director

HOTEL
FORT SHELBY

LaFayette and First

DETROIT

MARBLEHEAD
ANTI-FOULING
GREEN
BOTTOM PAINT

"We are pleased to recommend this preparation as representing the highest grade product that can be used."
—JOHN H. WELLS, Inc.

"We have used Marblehead Anti-Fouling Bottom Paint for nearly fifty-five years on practically all of our yachts and the fact that we continue to use and specify it wherever possible is proof that we are satisfied with the results obtained from this remarkable paint."
—HENRY J. GIELOW, Inc.

"We have been unable to find anything that will stand up as your paint does under all conditions."
—GEO. LAWLEY & SON CORP'N.

STEARNS-McKAY MFG. CO.
Marblehead, Mass., U. S. A.

What boatmen have been waiting for!

The DEBASCO knockabout and yacht tender

All mahogany, double planked and strongly built. Length 18 ft. Beam 62 in. Freeboard 27 in. Universal 4 cyl. 45 h.p. motor. Speed 30 miles an hour. Nickel silver hardware. Self starter. Electric lights. Heavily padded Russaloid cushions with springs.

DEBASCO BOAT WORKS, Inc.
Philadelphia office
N. E. Cor. Jasper & Willard Sts.
Plant
Leesburg, N. J.

LAND OR SEA—WHICH?

(*Continued from page* 194)

pep, instead of with nerves worn to a frazzle by an automobile trip through the congested traffic. Another little detail, his pocket-book had not been wrecked. His family had had a health-giving two day trip with three home meals, a night's lodging, fishing, rowing and swimming, at a total cost for food and gasoline of $8.50, or 71c per person per day.

After this experience you could not hold the Walpoles back. Every week-end saw them enjoying a cruise. When Mr. Walpole got his summer vacation they took a real voyage, stopping when and where they wanted, swimming, fishing, sightseeing, rowing, loafing or cruising as the spirit moved them. There was no mad rush and yet they covered a considerable distance and had the time of their lives. They stopped for long or short periods at Bridgeport, New London, Stonington, Block Island, Point Judith, Martha's Vinyard, Cape Cod Canal, Plymouth, Boton, Marblehead, Gloucester, Portsmouth, Isles of Shoal, York Harbor, York Beach, Kennebunkport and Portland. They were away a little over a month and burned five-hundred and fifty gallons of gasoline and five gallons of oil at a total cost of about a hundred and fifteen dollars, only a few dollars more than the cost of stepping on the gas once for a few minutes in New Jersey the previous year.

In some ports they just spent the night and were off the next morning. In other ports they remained several days till they felt like seeking fresh adventures elsewhere. There was no mad rush to keep up with the procession. The snug little home was always with them whether they remained at anchor or kept moving, so they just followed their desires without a thought of hotel expense. In nearly every port they made friends with yachtsmen, seamen or fishermen, and got a lot of real sea information. Sometimes friendly fishermen would take the boys off lobstering, setting trawls, seining, hand lining, etc. The boys learned to do all these things well, and eventually had a very complete fishing equipment of their own for all kinds of fishing. The fresh sea food obtained by the crew, besides being better than that obtained in the shops, cut down considerably on the cost of living. In the course of a month the whole family were tanned like Indians, and never had they been so full of health and pep. Mr. Walpole was always cautious and never set out without getting an opinion on the weather from some old salt or a local Coast Guard Station. In this way he was never out in a bad storm and nobody was made uncomfortable or nervous during the entire trip. In time he became pretty weather wise himself, learned to read the barometer and was able to talk the language of the old salts so that he was welcomed as a fellow craftsman instead of as a landlubber.

The food for the trip, helped out by the sea food, cost less than food at home. There were no expenses for hotels, tips, fines, storage, washing, purchase of old hats or anything else. The ocean is free to everyone for traveling or anchoring. There is no red tape and no traffic congestion. There are no fresh cops. There is plenty of room for everyone and each one is at liberty to go his own gait. If you desire to run slowly or stop entirely, you do not hold up a whole procession of angry boats behind you. The other boats simply go by you at their own gait, and the width of the road is more or less three thousand miles, so there is always room to pass without injury to fenders or feelings.

Charts for any part of the coast can be obtained from any dealer in marine supplies at a very nominal cost, and those who go down to the sea in ships always seem anxious to help out a fellow sailor in distress. It makes no difference whether the distress comes from accident, the elements or just plain ignorance, the Christian spirit is much more in evidence on sea than on land. On land, a chap in distress is apt to be an object of scorn or an opportunity for some wise guy to make some easy money. At sea, a chap in distress means an opportunity of giving a fellow sailor a helping hand. For anyone who is worn out with the mad rush for dollars and speed on land, or who just wants to get back to nature and really live, let him go down to the sea in a little ship of his own and he will learn something to his everlasting advantage.

E. R. JOHNSON BUILDS $1,500,000 YACHT

Eldridge R. Johnson, capitalist of Moorestown, N. J., and former president of the Victor Talking Machine Company, has signed a contract for the construction of a new yacht, involving an expenditure of a million and a half dollars. When completed, it is to be used on a scientific expedition in the Pacific, formed for the purpose of exploring Easter Island and attempting to trace the course of prehistoric Asiatic civilization across the Polynesian archipelago. Twenty scientists will be included in the group.

Announcing the
FIRST ANNUAL LOS ANGELES
BOAT SHOW

CONDUCTED BY
THE CIVIC
REGATTA
ASSOCIATION
of Southern California
In Conjunction With The
MIDWINTER
SAILING REGATTA

at the AMBASSADOR AUDITORIUM
LOS ANGELES, CALIFORNIA

MARCH 8 to 15 1930

HELD in the richest and most rapidly growing market for all types of pleasure boats and staged in conjunction with the famous Mid-Winter Sailing Regatta, the Los Angeles Boat Show enables the manufacturers and distributors to present their products to the interested public under the most favorable circumstances.

Applications for space are now being received and locations will be allotted in the sequence of their receipt.

Address all communications to:
MR. WALDO T. TUPPER, Manager,
Ambassador Auditorium, Los Angeles, Calif.

Visit the Los Angeles Boat Show Headquarters
at the COMMODORE HOTEL—NEW YORK
During the Annual Motor Boat Show

Sailors of the Air aboard the Los Angeles

enjoy cooking service as convenient as a home supplied with city gas

Hot food in all weather, quickly and easily prepared, means everything to sailors—whether of the air or of the water. The cooking service of the "Los Angeles" is as dependable, safe and convenient as the crew enjoys at home. Protane Bottled Gas is used.

Small, Easily Stowed Fuel Containers

Protane is the choicest part of genuine natural gas. The steel containers are only 13 inches in diameter by 22 inches high. Less than one of the containers served about 150 meals each day for a whole week on a cruise of the Los Angeles. Two containers on every system always assures one in reserve.

New Model PROTANE MARINE STOVE

No. 400

Specially designed to put into minimum space facilities for top-burner cooking, baking, broiling, roasting and toasting.

Complete Cooking Equipment in space only 20 x 22 x 23½ inches

This new model is only one of Protane's extensive line of appliances specifically designed for marine use. You will find hundreds of yachts along the Atlantic and Pacific Coasts and on the Great Lakes, enjoying the safe cleanliness and convenience of Protane systems.

Cooking, water heating and cabin heating systems are displayed at the Motor Boat Show. Illustrated folder of Protane marine appliances upon request. Write for a copy.

PROTANE BOTTLED GAS

Booth 138 at the Motor Boat Show.

The PROTANE CORPORATION
ERIE, PA.

Reliable Dealers and Agents at most American Ports

YARD AND SHOP

(Continued from page 180)

GRAY SUPPLIES MATCHED UNITS

Heretofore a pair of opposite rotation motors has consisted of one standard motor and one special motor which was built by hand to turn in the opposite direction. This special motor had a left hand, hand-made camshaft, a left-hand cylinder block casting, a left-hand clutch and reverse gear, a special starter, generator, distributor, Bendix drive—in fact every moving part of it was specially made by hand in small quantities. Because of the limited production of these opposite rotation engines, standard precision methods of manufacture were not possible, the product itself was off-standard in every respect, it was extremely difficult to snychronize its power output with that of a standard motor, and there was a tremendous problem in the servicing of it at the factory and through dealers, particularly as time went on and the motor became several years old.

It is true that these motors were symmetrical in appearance. However, their similarity and symmetry ceased at that point, and there were no matching of power, of adjustment, of installation, nor of servicing.

The new Gray Matched-Unit opposite rotation Eights have completely done away with this off-standard method of production. Every Gray Eight, whether it turns right-hand or left-hand, uses identically the same pistons, camshaft, crankshaft, cylinder block, valve mechanism, reverse gear, distributor, starter, generator, water pump, oil pump, Bendix drive, etc.

No right or left-hand wearing parts are used. Gray Matched Unit construction preserves in both motors the finest precision and complete standardization of all parts as well as complete equality of power output at all throttle settings.

Gray Matched Unit Eights are perfectly symmetrical in appearance. Gray's already tremendous production of this engine will be greatly increased and the benefits of complete standardization of every operation and part in the manufacture of the engine will be more pronounced than ever. Gray Matched Units give perfect synchronization, perfect uniformity, perfect symmetry and complete protection against future orphanage of motors using off-standard parts and equipment.

The same style of opposite rotation Matched Unit parts will be available in the new Gray overhead valve model six-90.

WATERWAY TO LINK CORPUS CHRISTI-NEW ORLEANS

After long years of planning and development, backed by a group of public-spirited men, a new cruising paradise is to be opened to yachtsmen and sportsmen by means of an intracoastal waterway through the Gulf states of Louisiana and Texas, connecting New Orleans and Corpus Christi. A route has been mapped out by government engineers which pursues a protected course just inside the lower edge of the two states, skirting the Gulf of Mexico and taking advantage, in so far as possible, of existing rivers, lakes and bays.

Eventually it is hoped that an extension of this waterway will be run down to Point Isabel on the Rio Grande where it would connect with a Mexican coastal waterway, to be known as the Mexican Intracoastal Canal, which would run as far as the Rio Panuco at least. The territory through which the canals will run is famed as a sportsman's paradise, abounding in fish and game of many species, besides which it gives easy access at many points to the waters of the Gulf.

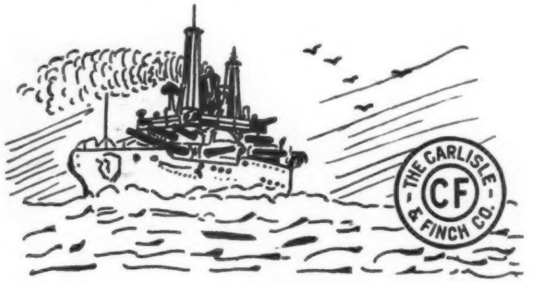
The proposed waterway opens to northern boatmen a wonderful cruising territory. Cruisers will now be able to come down from the Great Lakes on the Mississippi as far as New Orleans, where the new canal will connect and take them through protected waters to Corpus Christi, and later, to Mexican waterways. Good anchorages will be available all along the route and from these protected anchorages it will be a comparatively short run out into the Gulf to one of the world's finest fishing grounds.

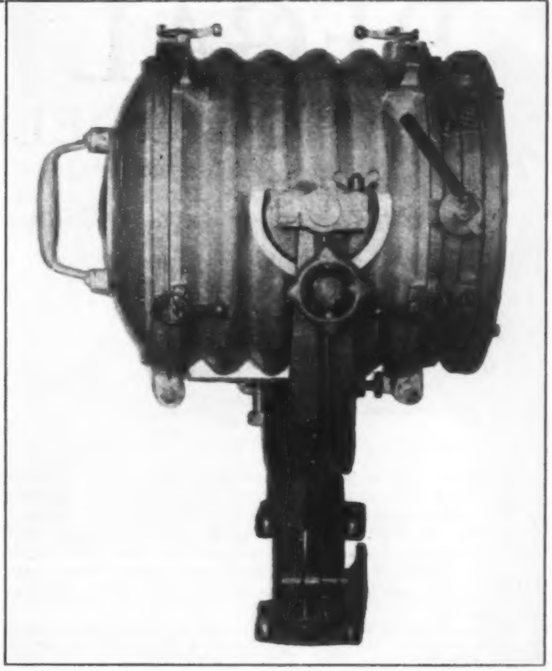
FOR SHIP MODEL MAKERS

Persons contemplating the construction of a model ship or yacht will want to know about a little publication known as the Shipmodeler, published monthly as the official organ of the Ship Model Maker's Club. It contains invaluable suggestions for the modeler on all the subjects about which he requires information in the construction of a model.

Such things as authentic information on the lines and proportions to ancient and modern types of ships are given considerable attention, as well as shop notes which give helpful pointers on many obscure details of construction.

(Continued on page 490)





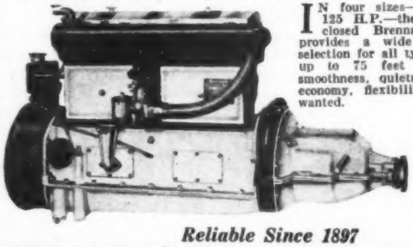
U. S. and Foreign Navies
Use
Carlisle & Finch
SEARCHLIGHTS
On Sea and Land

These famous searchlights are used on battleships, ocean liners, river and lake steamers and on yachts and power boats.

Send for Catalog I of Incandescent Searchlights and for Catalog A of Arc Searchlights

12" Navy signalling searchlight used in the Philippine Islands.

THE CARLISLE & FINCH CO.
261 E. Clifton Ave. Cincinnati, Ohio



BRENNAN DE LUXE SIX
for Cruisers, Runabouts and Commuters

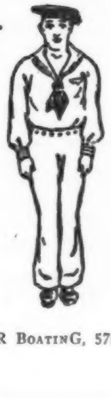
IN four sizes—60, 90, 100 and 125 H.P.—the compact, all-enclosed Brennan De Luxe Six provides a wide range of power selection for all types of motor craft up to 75 feet in length where smoothness, quietness, dependability, economy, flexibility and speed are wanted.

Write today for BRENNAN catalogue. Eleven models—15 H.P. to 200 H. P.

Boat Builders and Engine Dealers: Write for our proposition.

Reliable Since 1897

BRENNAN MOTOR MANUFACTURING CO.
500 E. WATER·STREET SYRACUSE, NEW YORK



B·Schellenberg & Sons

EVERYTHING FOR THE PERSON OF THE YACHTSMAN, HIS OFFICERS AND HIS CREW

Clubs, yacht owners, commercial boat owners should take advantage of our almost 70 years' experience in outfitting the mariner, both inland and deep sea.

Crews and Club attendants furnished without Charge

B. SCHELLENBERG & SONS
Established in 1857
99 to 105 Myrtle Avenue
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Telephone: Cumberland 0804

OWENS BOATS

20 Ft. DOUBLE COCKPIT RUNABOUT
20 to 30 Miles per Hour
Price $980

26 Ft. CABIN CRUISER RUNABOUT
15 to 25 Miles per Hour
Price $1680

THESE boats are built in the best possible manner of the finest materials. Mahogany, over white oak framing, with bronze fastenings throughout.

They are up-to-date, completely equipped for every service and comfort; the cruiser with berths, galley, toilet and all necessary details; the runabout with a full inventory that accompanies the finest outfits.

The prices will surprise you:

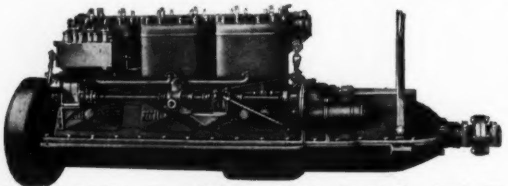
FOR THE RUNABOUT .... $ 980
FOR THE CRUISER $1680

and up, depending, of course, upon the motor.

Let us tell you more about them.

OWENS BOAT COMPANY
ANNAPOLIS, MARYLAND

REGAL
offers 18 MODELS for 1930
1 to 6 Cylinders—2 h.p. to 75 h.p.



Regal Model KF. Six cylinders, 75 H.P. Bore 5½". Stroke 7".

PUT your power problem up to Regal, for a lasting and economical solution. Regal marine engines, with over a quarter of a century of constant service to their record in pleasure, commercial and fishing craft, have demonstrated over and over again their unusually low operating and maintenance cost and their endless stamina under the most adverse conditions.

Before selecting a power plant for that medium or heavy job of yours, write for the 1930 Regal catalogue. The latest Regals are equipped with high speed reversing gears and Link Belt silent chain drive for timing gears.

Also manufacturers of Regalite ¾ Kw. Air-cooled Electric Lighting Plants for boats and homes. Ask for particulars.

REGAL GASOLINE ENGINE COMPANY
Established 1901
74-82 WEST PEARL ST. COLDWATER, MICHIGAN

In Detroit . . . the
DETROIT-LELAND HOTEL

Seldom, if ever, has any hotel enjoyed such success as the new Detroit-Leland Hotel.

And today the Detroit-Leland enjoys a local, national and international reputation which places it among the world's foremost exclusive hotels.

700 Large Rooms with Bath
85% are priced from $3.00 to $5.00
DETROIT-LELAND HOTEL
Bagley at Cass
WM. J. CHITTENDEN, JR., Managing Director
Direction, BOWMAN MANAGEMENT

BUELL Trombone Horn

Compels Attention!
A Powerful and Distinctive Air Horn
for Motor Boats, Yachts and Autos
Models in Polished Brass and Chrome Plate from $30 to $95
Write for descriptive literature
BUELL MANUFACTURING CO.
2981 Cottage Grove Ave. CHICAGO, ILL.
For 15 Years Manufacturers of BUELL Whistles

YARD AND SHOP

(*Continued from page* 488)

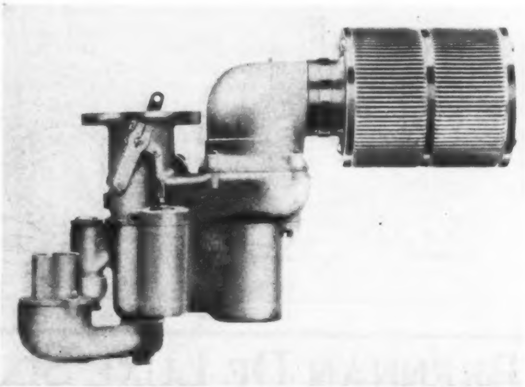
SAFETY DEVICES AT THE SHOW

To make motorboating the safest of all sports, is the keynote of the Oberdorfer Pump display at the Motor Boat Show in booths 75 and 76.

The two oustanding hazards of boating are fire and leaking and the M. L. Oberdorfer Brass Company has developed two important safety devices which bring vital protection against these dangers.

Statistics show that one of the most common causes of fire is backfiring of the motor. Ordinarily a flash of flame will shoot out from the air horn of the carbureter and with gasoline fumes always present, this constitutes a serious menace. The Oberdorfer Backfire Trap is a safety device which, when installed on the air horn of the carbureter, not only arrests the backfire flame and explosive force, but traps and kills it as well. It is an Underwriter's approved device and is built specially to marine specifications of non-corrosive metals.

The Oberdorfer Backfire Trap will not interfere in any way with the functioning of a motor. It is available in three sizes, so that practically any size of carbureter can be equipped with this safety device. Its use marks an important step forward in marine safety and overcomes a problem that has been of great concern.



The Oberdorfer Backfire Trap, a safety device which effectually eliminates the dangers of motor backfiring

Another safety device is the Oberdorfer Automatic Electric Bilge Pump. No boat is entirely safe when left alone in the water, and the presence of a mechanical robot that will act as guardian of your bilges is an important protection. When storms rage and seas roll high, it is comforting to know that should rain get in your boat or seams leak, this powerful little pumping outfit will keep it bailed out at all times.

The makers of the famous Chris-Craft cruisers are installing an Oberdorfer Automatic Bilge Pump in every one of the new models as standard equipment. They can be easily installed on any boat. They occupy little space and can be run from ignition or lighting storage battery. Like every other Oberdorfer product, their automatic bilge pumps are built of non-corrosive metals and are resistant to the effects of salt water. The Master Model is available in 6-12 and 32-volt units; the improved Model B in 6 and 12-volt units.

Other items of the Oberdorfer line at the show give full justification of their slogan—A Pump for Every Marine Use. Back of the Oberdorfer is a record of serving the marine field for over half a century with pumps that have greatly increased the safety, pleasure, convenience and efficiency of motor boats.

The Oberdorfer Hand Bilge Pump has long been a favorite with boat owners. It is a speedy and efficient pump that should be on every boat where current is not available for a motor-driven outfit, or as an auxiliary pump.

To the man considering the purchase of a new marine motor, the name Oberdorfer on the circulating pump means a great deal. Old motors are sometimes pepped up amazingly by replacing an old pump with a new Oberdorfer. Oberdorfer Bronze Gear Pumps are made in all standard sizes, types and forms.

Oberdorfer Motor Driven Outfits with gear or centrifugal pumps are widely used for bilge pumps, galley and lavatory water supply pumps, fuel pumps and for deck flushing and fire use.

Oberdorfer products are widely distributed and may be obtained from marine supply dealers everywhere.

for...

$995

F. O. B. NORWALK, OHIO

This is one of the super-fine models offered by Chase-Emerson at the New York Show. Completely equipped with windshield, lights, and auto type driving controls with non-corrosive hardware, this 16-foot hull of Philippine hardwood in its smart design and exquisite craftsmanship climaxes the 50 years of experience in fine woodworking of Chase-Emerson.

The Van Blerck Junior power plant guarantees a speed of 25 m.p.h. with a performance second to none.

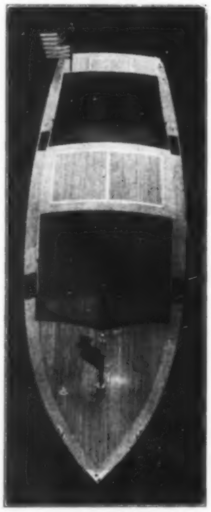
CHASE-EMERSON

IN BOARD BOATS

are recognized as the last word in design, construction, beauty, and maneuverability. They are built luxuriously to give speed with safety, and comfort with practicability.

The adjoining deck plan shows the spacious cockpits affording comfortable seating appointments for five grown people.

You are cordially invited to inspect these and other models at Booth R., Mezzanine Floor, New York Motor Boat Show, Jan. 17th to 25th.



A. B. CHASE-EMERSON CORP.
11 West 42nd St., New York City. Factories, Norwalk, Ohio

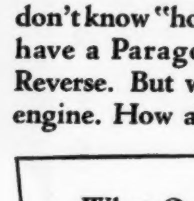
Did You See 'Em At The Show?

The Most Popular Engines Had 'Em —Didn't They!

Yes, we saw that big lonely engine on the left over there too. Sure it was a fine engine. No, we don't know "how come" it didn't have a Paragon High Speed Reverse. But why pick on that engine. How about the others.

What Our New *Absolutely Oil-Tight* Models Mean to You

Freedom from all Flying Oil
Freedom from Repairs
Continuous Service
Ease of Adjustment
Simplicity of Construction
Easy-to-Reach Parts
Accuracy of Design
Heat Treated Gears
and A High Speed Reverse



The "90" Line
PARAGON

PARAGON GEAR WORKS
601 Cushman Street, Taunton, Mass.

"There are no trick parts to a Paragon"

YARD AND SHOP

(*Continued from page* 490)

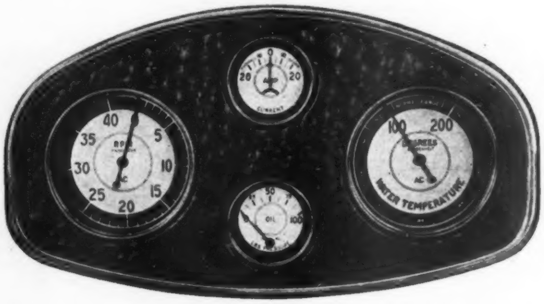
ATTRACTIVE INSTRUMENT PANELS

A newly developed outboard tachometer will be shown at the Silver Anniversary National Motor Boat Show by the AC Spark Plug Company. Other new AC products will be three different types of instrument board panels for three, four, and five instruments.

Incorporated in the new tachometer is an aluminum frame and S. A. E. square drive.

Three special rubber gaskets are used incide of the head and all places where water could penetrate are carefully sealed so as to avoid any damage when the head is submerged in water for a reasonable length of time. To further insure the waterproofness, a molded rubber sleeve 5 inches long is assembled over the upper end of the flexible shaft connection. On the drive is a snap-on attachment so that it is held in position in a semi-positive way and cannot jump off even on very rough water encountered sometimes during racing.

The main face plate of the new instrument board panels is made of special rolled brass giving a fish-scale effect and sprayed in rich black. It is corrosion-proof. The instrument dials have an entirely novel appearance and design, being not only attractive, but easy to read. Basic colors of the dials are silver and black.



Newest type of instrument board panel developed by the A C Spark Plug Company

MORE POWER

The Roberts Motor Company of Sandusky, Ohio, well known as the manuacturers of the Roberts marine motor, now announce the production of five entirely new models which will bear the name of the Johnston motor. All are of the four-cylinder, four-cycle type and range in power from 16 to 60 h.p.

The smallest of the new engines, model V, is a medium-duty motor, developing 16 h.p. at 1,200 r.p.m. Model RS is an L-head motor rated 35 h.p. at 2,000 r.p.m. HS is of the light weight, high speed type, with a piston displacement of 79.4 cubic inches, designed to turn a maximum of 5,000 r.p.m., at which speed it produces 38 h.p. A new 40 h.p. motor is known as the A-S type. It has a bore of 3⅞ and stroke of 4½ with a speed range from 150 to 1,500 r.p.m. Another of the new models is rated at 50 h.p. and develops a maximum of 54 h.p. at 1,600 r.p.m. This is another L-head machine, having a bore of 4 inches and 5-inch stroke. Model C, the largest of the new motors, completes the line. This is a clean-cut, fully enclosed model which develops 60 h.p. All types embody the most up-to-date refinements of marine engine design and are constructed to produce a smooth and flexible flow of power for long periods.

REDUCTION GEARS AND EFFICIENCY

One of the most interesting of the recent yacht constructions is to be found in Fearless II, built for E. B. Phillips of Boston by W. J. Reid. The original design, laid out by S. S. Crocker, Jr., called for two medium speed Model U Cummins Diesel engines driving through a pair of Morse Straight Line Reduction Gears.

These engines operate at a speed of 900 r.p.m., with Morse Model F Reduction Gears giving a propeller speed of 450 r.p.m. —a 2 to 1 reduction. This 65-foot boat is thus capable of a speed of 10 knots or 11½ statute miles, which is considered very unusual in view of the type of power used, and the r.p.m. of the propeller. The maneuverability of the boat is perfect, and the whole hull is particularly free from the engine vibration that might reasonably be expected.

Owner and designer alike are enthusiastic over the excellent results achieved by deliberately planning a combination of engines and Morse Straight Line Reduction Gears.

(*Continued on page* 494)

THE HOLLEY DOWNDRAFT CARBURETOR IS THE MOST EXPENSIVE CARBURETOR ON THE MARKET BUT RESULTS JUSTIFY ITS PRICE

USED BY

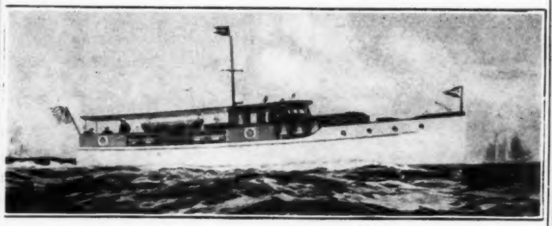
Chrysler, Gray, Kermath, Lathrop, Lycoming, Scripps, Speedway, and Chris Smith

HOLLEY CARBURETOR COMPANY
DETROIT, MICHIGAN

THE

GREAT LAKES

60 Foot Express Cruiser



A New and Highly Desirable Express Cruiser Brought Out by the Pioneer Builders of Express Cruisers

SPEED ◆ COMFORT

SEAWORTHINESS

Skillful design made possible by years of experience has produced a hull of exceedingly graceful and attractive lines. Its attractive appearance is further enhanced by that same beautiful finish and fine turn of speed which has come to be associated with Great Lakes custom built yachts.

There are two comfortable double staterooms with bath, large after deck, deckhouse lounging saloon containing the wheel and controls, a pleasant deckhouse dining saloon, and galley and crew's quarters forward.

Equipment is unusually complete and includes hot and cold running water, mechanical refrigeration, and a 4-cylinder water cooled lighting plant. The main engines are arranged with full bridge deck control for one man operation.

If you desire a yacht to provide the utmost enjoyment and carefree relaxation you will be interested in looking over more detailed particulars which will gladly be sent to you.

GREAT LAKES
Boat Building Corporation
Office: 400 North Michigan Ave.
Yard and Plant: 3250 N. Washtenaw Ave.
CHICAGO

YARD AND SHOP

(*Continued from page 492*)

THE FLEETWING FIFTY

One of the outstanding features of the Motor Boat Show is exhibited by the Fleetwing Yacht & Shipbuilding Corp., of New York City. This is a newly designed fifty-foot Fleetwing Express Cruiser, powered with two 170 h.p. Fleetwing engines, producing a speed of about twenty-two miles per hour. It is mahogany planked and mahogany finished and among other things has seven absolute water-tight compartments. The builders, above all, have considered safety first to combat all hazards. The gasoline tanks are installed in entirely separate copper-lined compartments which drain overboard, and the gas lines feed from the top of the tanks. A special mechanical ventilating system changes the air in every part of the boat every three-and-a-half minutes. The latest electrical equipment, as well as a pressure water system and refrigeration are included. Entirely new in construction and equipment is that of the fastenings, shaftings, struts, propellers, etc., which are built and cast from Duro bronze, a new metal that has the tensile strength of nickel steel and yet is non-corrosive, will not crystalize and is non-galvanic. Ample accommodations are provided for the owner and seven guests as well as separate crew's quarters for two. The cabin includes a hot and cold shower and an extra lavatory.

CHRYSLER FEATURES INCREASED POWER

The addition of an entirely new Crown engine and three new and more powerful types of Imperial engines to its already extensive line, is announced by the Marine Engine Division of the Chrysler Corporation. The new marine engines feature more power and the addition of many new and important improvements which are considered sensational in the realm of motor boat power plants.

Some of the most important improvements to be found on these engines are dual-type down-craft carburetion; a new and distinctive gasoline pump and an improved integral-type intake and exhaust manifold, more efficient and revolutionary than any heretofore included in marine engine construction. Each improvement is the direct result of tireless experimentation on the part of Chrysler Motors engineering department and represents the latest design of experts, particularly experienced in this field.

The new engines this year are the Crown and the Imperial Types A, C and AMR. The Imperial types have a bore of 3⅝ inches, a stroke of 5 inches and develop 125 horsepower. This horsepower output occurs at an engine speed of 2,800 revolutions per minute, yet the engine is capable of still greater speed. The Types A and C engines weigh 940 pounds and the Type AMR, which is basically the same engine with the addition of the new and improved Chrysler reduction gear, weighs 1,125 pounds. The new Crown engine, which fills a need felt for some time among pleasure boat owners and is the latest product of Chrysler marine engineers, has a bore of 3⅛ inches, a stroke of 4⅛ inches and develops 75 horsepower at 3,300 revolutions per minute, with a weight of 625 pounds.

The incorporation of dual-type down-draft carburetion on the new marine engines is a notable feature. The carbureter is mounted above the engine instead of at the side, permitting the fuel to flow naturally downward aided by the force of gravity. This fundamental difference produces an amazing gain in horsepower. The down-draft method utilizes a fuel pump operating in unison with the engine, insuring a positive and uniform supply of gasoline under all engine loads and speeds.

The new integral-type intake and exhaust manifold is another sensational development on boat engines. The unified construction of the intake and exhaust manifold permits the pre-heating of the fuel mixture by the exhaust itself before it enters the combustion chambers of the engine, thus facilitating the natural principle of combustion engines and making for additional power with a consequent fuel saving.

The new Chrysler marine engines have aluminum alloy pistons with Invar Struts, which were pioneered by Chrysler engineers, minimizing expansion and contraction of the piston skirts. There is also a rigidly-webbed, statically and dynamically-balanced seven-bearing crankshaft, full force-feed lubrication, oil cooler, crankcase ventilator and scores of other refinements that account for the difference between superlative and ordinary performance.

The AMR type of Chrysler marine engine, both in the new Imperial and in the Royal AMR, features the new Chrysler reduction gear, permitting the installation of Chrysler engines in larger boats requiring slower propeller speed, and giving increased boat-speed, smoother and quieter performance, with a definite saving in weight, space and—just as important—money.

(*Continued on page 496*)

YARD AND SHOP

THREE STAR A SPEEDY CRAFT

The Three Star outboard boat, product of the Pigeon Hollow Spar Company, is one of those well designed craft which seems to attain its speed with very little difficulty and travel along easily with practically no water disturbance.

Three models are produced, constructed entirely of mahogany. There is a 12-footer of 4½-foot beam designed as a 2-passenger craft, a 14-footer with 4-foot beam for 4 persons, and another 14-footer of 4½-foot beam which will carry six.

Construction on all boats is of the best and only the finest of materials are used, resulting in a strong craft, capable of standing up to many seasons' usage.

DEBASCO TO OFFER NEW MODELS

The Debasco Boat Works, located at Leesburg, N. J., will enlarge their line of high grade watercraft for 1930 with several new models. Standardized cruisers and all mahogany runabouts ranging in length from 17 to 24 feet will be produced, together with several models of outboard craft.

Two of the inboard craft, 17 and 18 feet in length, will be powered with Universal engines, 45 and 85 h.p. respectively, which will deliver a generous turn of speed.

In the outboard line the 12-foot Champion and 10-foot Junior are popular models, being capable of high rates of speed with moderate power.

HUSKY MARINE ENGINES

The Standard Motor Construction Company is one of those manufacturers that can supply a marine power plant of either the gasoline or diesel variety. All models are of the heavy-duty type, for which the Standard company has long been known.

In the gasoline types, 2, 3, 4 and 6 cylindered engines are built in powers that run from 10 to 220. Ratings are all conservative and all motors feature exceedingly rugged construction with big bore and stroke turning at low revolution rates.

The diesel models are nine in number. These are all large engines with the lowest power rating set at 60 h.p. for the 4 cylindered 6x8 motor and the heaviest running up to 400 h.p. for a 6 cylinder machine of 13½x17-inch bore and stroke turning over at 275 r.p.m.

Standard engines make ideal auxiliary power and are well suited to any service where an unfailing source of power is essential. The diesels burn a very low grade of fuel efficiently, are extremely economical and give satisfaction under all conditions.

SPEED WITH SAFETY

For those persons who insist upon a craft that is not only capable of high speeds but one which is entirely safe even in rough going, the Lyman Boat Works, out at Sandusky, Ohio, are producing a most complete series of outboard hulls. They are specialists in the construction of clinker built boats, a type celebrated for its sturdiness on a given weight of material. They were, in fact, pioneers in the development of clinker-built speed tenders.

Their line includes models which range from eight to seventeen feet in length, with speed tenders, sea skiffs, runabouts and, in short, a model for every requirement.

A DE LUXE SIX

Prominent among the popular marine motors of today is the Brennan De Luxe Six—a powerful marine plant built in four sizes—60, 90, 100 and 125 h.p. Each of these models is clean cut and compact with moving parts fully enclosed, yet easily accessible for adjustment and repair. Smoothness, quietness, flexibility, economy and dependability are qualities for which the Brennan motor has long been known and the new models have them all in a high degree. These four motors in the six cylinder type provide a range which supplies a choice to power for all manner of cruisers, work boats, runabouts and auxiliaries up to 75 feet in length.

In addition, seven other models are available which are not included in the six cylinder group—horsepower ratings running all the way from 15 to 200.

Know Your ROPES!

HAS your engine ever balked? Were you ever dismasted? Or disabled on a lee shore?

Be prepared! Know the kind, size, weight and length of rope to use for safety with power or sailing craft. Our new, FREE, illustrated booklet, *"Rope for the Boatman,"* explains everything a boatman needs to know about rope. Address—
PLYMOUTH CORDAGE CO.,
North Plymouth, Mass.

PLYMOUTH *The Rope You Can Trust*

DE LUXE YACHT LOG

For Pleasure Entries.

Keep a record with notes, sketches or photographs, the interesting happenings of cruises, fishing parties or races.

First Of Its Kind

No other log like it. Printed on heavy art paper, bound in real calf. Cover embossed with your club burgee and house flag, in gold leaf and oil colors. An artistic, durable and practical addition to your library. Grows more interesting as records accumulate.

Size 8" x 11"
Price $12.50

PUBLISHED YEARLY—Be sure and send the name of your boat, yacht club, and design of your house flag in colors, with your order.

LOOK FOR US at the NEW YORK MOTOR BOAT SHOW

Marine Publishing Co., Box 265, Beverly Hills, Cal.

HI-DUTY PUMPS *and* The AQUA-PRESSOR

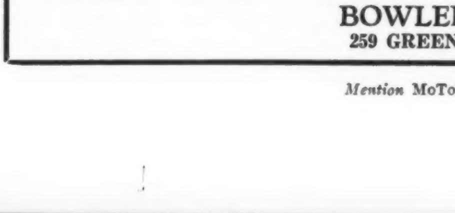
Engine room necessities for the finer yachts.

Pump units are available in four sizes, ranging from 5 to 20 gallons per minute. May be had with 12-32 or 110 volt motors.

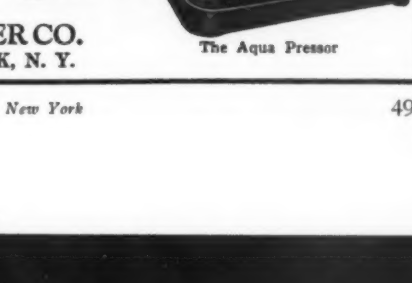
The Aqua-Pressor may be had as an air compressor only, and with 32 or 110 volt motor.

Write today for literature and prices

BOWLER, HOLMES & HECKER CO.
259 GREENWICH ST. NEW YORK, N. Y.



The High-Duty Pump



The Aqua Pressor

It's Better
To Be Safe
Than Sorry—

Propeller shaft vibration—shaft vibration—shaft wear—a "frozen" bearing—a trip to dry-dock—expense and annoyance—

you can avoid them

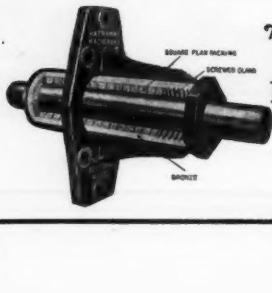
Profit by the experience of skippers who cannot afford to take chances—follow the example of men to whom time means money—men who must know how to avoid delays and expense, or fail—canny fishing skippers whose years of hard experience have rendered them deaf to mere claims, and loyal to the things they have tested and proved.

The Hathaway
RESILIENT
Flax Packed Stern Bearing

is the universal choice of experienced fishermen — of designers who put efficiency above cost considerations — of yachtsmen who realize the importance of safeguarding their pleasure program against annoyance and interruption.

Actual tests during the past 15 years prove that Hathaway Bearings give from one to five years trouble-free service without repacking or noticeable shaft wear.

Write for complete information, data and prices.



The Hathaway
Machinery Co.
New Bedford,
Mass.

YARD AND SHOP

(*Continued from page* 494)

TIDE CALENDARS AVAILABLE

Tide Calendars for 1930 are now being distributed by the Vacuum Oil Company, 61 Broadway, New York.

The calendar of New York tides gives tables for Sandy Hook, Governor's Island and Hell Gate Light. An appended page gives information on the computation of tides at all of the other principal ports of the Atlantic Coast.

The calendar for Boston gives tables for high and low water at Commonwealth Pier, Boston, and Governor's Island, N. Y., and includes a computation chart for figuring tides at Gloucester, New Bedford, Woods Hole, Newport, Providence, Fall River, Falmouth, Portland, Bar Harbor and other points on the Maine and Massachusetts coasts.

The new 38-foot twin-screw express commuter built by the Dyer Motorcraft Corp., is capable of a 30-mile speed

HALL-SCOTT OFFERS NEW MOTOR

Hall-Scott offers a new 4¼ x 5½ marine engine which includes a large number of improvements over their previous engine of the same size. The horsepower has been increased by about 16%, this having been accomplished by changes in manifolding and valve action and by turning up to a higher speed, to facilitate which the crankshaft has been counterbalanced. Dual ignition has been provided, with plugs on one side being run by a battery current distributor while, the other side is equipped with a magneto, offering an easy means of starting in case the battery should ever fail. The generator can be cut out to avoid over-charging of the battery. An improved type of down-draft manifold is used with dual horizontal carbureters, manifolds being designed for even distribution of fuel mixture. The manifolds are water jacketed in such a way that a large amount of heat is supplied to the mixture at low speeds, but at full throttle operation a diminished amount of heat is supplied per unit of fuel mixture. This enables the engine to run on a relatively cold mixture throughout the higher operating range, giving a higher volumetric efficiency and increased power, the manifold design taking care of the problem of uniform distribution of the wet and dry portions of the mixture. The complete fuel system is of the closed type with a positive acting syphon type gasoline pump of special Hall-Scott design, eliminating gravity feed entirely. The exhaust breather on the rocker arm cover is connected with the air inlet to the carbureters which passes all engine fumes through the cylinders and out the exhaust pipes, at the same time drawing off the dilution from the lubricating oil without wasting the oil.

The Model HD-175 horsepower Hall-Scott engine is continued with improvements in the down-draft manifolding developed prior to the introduction of last year's model, other improvements including refinements in the closed type fuel system and provision for the burning of engine fumes.

The LM-6 and HSR-6 are continued with only minor changes.

The phenomenal success that has been experienced through handling of heavy work boats and large cruisers with the Hall-Scott 3:1 reduction gear has led this year to the introduction of a 5:1 gear for the larger Hall-Scott engines. This is developed particularly for use in tow boats, light ferry boats, seine boats scows, etc., where the displacement of the body to be moved is particularly large and where the use of an extraordinarily large propeller is imperative.

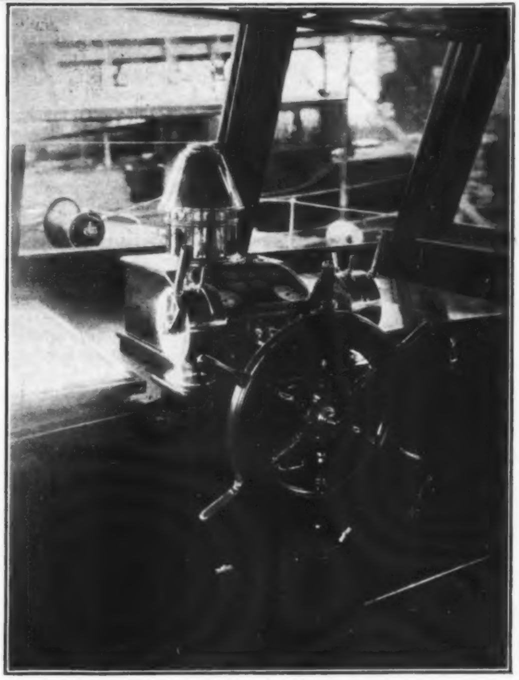
(*Continued on page* 498)

THE NEW 1930 MODEL

DACHEL CARTER Twin 45 Screw

34 Foot Commuter *and* 40 Foot Express Cruiser

In the 1930 Dachel-Carter bridge deck cruiser you have forty-five feet of master boat construction embodying every refinement demanded by modern yachtsmen. It is an excellent sea-boat having a beam of 11 feet, 4 inches, and staunch construction throughout. It's a safe, fast and supremely comfortable twin-screw cruiser with features found in no other yacht of its type, and at a price that is a real surprise. Accommodations consist of a roomy stateroom aft with two spacious lower berths—a forward cabin to accommodate four—a completely outfitted galley — two toilets — with commodious locker and drawers, in addition to large deck space. Everything is marked by extreme completeness and fine detail, coupled with carefully supervised workmanship and the use of selected materials. Fully enclosed bridge deck can be furnished at additional cost.



All operating controls are centered neatly on the bridge for one-man operation. Note the large mahogany wheel, Kimball engine controls, switches, unit instrument panel for two engines. Everything within sight and easy reach of the helmsman.

And for those desiring a larger cruiser with better accommodations for a crew we offer our new

48 Foot FAST CRUISER

Comfortable Crew Quarters Forward

Pressure Water System

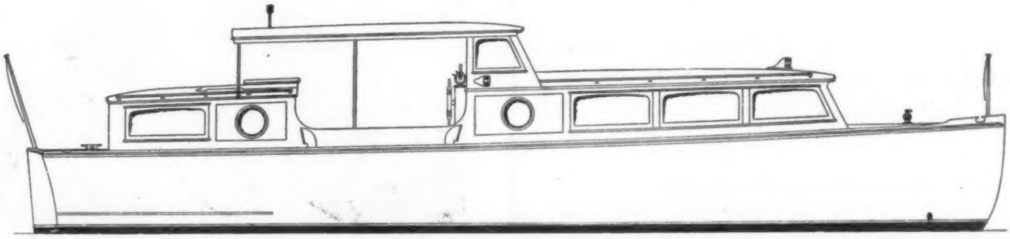
Electric Refrigeration

Shower Bath in Owner's Quarters

All Conveniences of a Modern Home

Buy direct from us—save 5 to 10 thousand dollars dealer's commission.

Our New 40 Foot Double Cabin Express Cruiser



Owner's cabin aft, containing large double berths, 4 feet wide, hanging clothes lockers and large toilet room. Bookcase and writing desk. Forward cabin seats 10 people commmfortably, with sleeping accommodations for five. Toilet room, hanging clothes lockers and locker space under seats. Large galley, having ice-box with 200-lb. capacity, Protane gas stove, sink, dish locker and other conveniences. Speeds from 18 to 40 miles, depending on power unit.

DACHEL-CARTER BOAT CO., Inc.

BENTON HARBOR **MICHIGAN**

LEE
Blower

In a recent ruling, the National Association of Boat and Engine Manufacturers, in collaboration with the Insurance Companies, strongly recommend the use of a power blower in the engine compartment of every boat. The Lee Blower meets this requirement in every way and adds much to the value of safety in eliminating foul gases from this confined space.

Your boat should not be without this safety device furnished in 6, 12, 32 and 110 volts.

Immediate deliveries.

S. CLYDE KYLE
1763 Broadway New York City

YARD AND SHOP

(*Continued from page* 496)

TECHNICAL ADVICE FOR BOATMEN

The Indiana Quartered Oak Company, importers of Indoako wood, are exhibiting at the Show again this year and announce a special service available to anyone with a boat problem to solve. Cliff Hadley, nationally known designer and builder of runabouts and hydroplanes, will be at the Indiana booth every day of the Show from 2 until 10 P. M. Mr. Hadley has had many years' experience in designing and building speed boats and his expert advice will be much appreciated by boatmen perplexed by knotty problems. The Indiana Company invites everyone to avail themselves of this service free of charge. Their exhibit includes many interesting ship models, finished and unfinished, samples of Indoako wood, and photographs of their Philippine Island plant.

NAUTICAL SALON IN BOSTON

Following the practice of the higher priced quality automobile dealers in recent years, the Walter H. Moreton Corporation, Boston's Permanent Boat and Engine Show, so-called, have announced a special salon or show of greatest interest for New England yachtsmen, to take place the week beginning January 27, directly after the National Show in New York.

Situated on Commonwealth Avenue, Boston, in the heart of Automobile Row, Boston's Permanent Boat and Engine Show has been a perpetual reminder to the public of the tremendous interest in boats and engines.

The present large boat lines comprise nationally advertised and famous ones; the cruisers being Matthews and Richardson, and the runabouts Hackercraft. For this special show, visiting yachtsmen may view one of the largest boats on display in New England, a Matthews 46 Double Cabin de Luxe Sport Cruiser, powered with twin 200 h.p. Sterling Petrel engines.

The ever popular and famous Matthews 38 single-cabin cruiser is also on display. This model is always a favorite one for the New York Show crowd, and those who miss this may see the very latest 1930 model in Boston. A new 1930 Richardson Double Cabin Cruiser will interest many. This year's boat is considerably larger, being 29 feet in length, has more power, accommodations for six, and occupies no mean part in this display for the yachtsmen who want a smaller but complete boat at a moderate investment.

The boat owner whose natural bent is the thrill of speed may see the new Hackercraft runabouts of the latest design. Of course, there are outboard boats, galore, for the outboard fan, who can inspect racing or family boats at this show.

No visitor to a boat show has failed to notice the interested crowd around the large Diesel engines, which seem to hold an interest for the layman as well as the technically inclined alike. This New England Salon has not omitted this important feature and architects, owners, captains and engineers of the larger yachts are promised a special treat in a unique display of two Winton Diesel engines. These motors will be arranged in the complete form of a regular twin-screw installation in a large yacht, with the necessary auxiliary generators and compressors properly placed just as they normally would be used.

Walter H. Moreton Corporation offers a cordial invitation to all interested to inspect this special salon, January 27 to February 1, the week directly after the New York Show, and especially to those who fail to reach the New York Show.

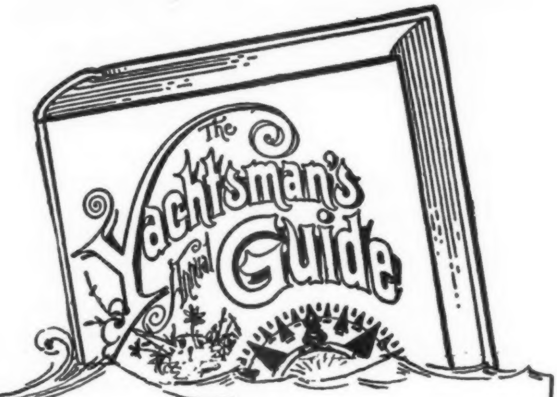
(*Continued on page* 506)

Of striking beauty and staunch construction these Artistic Steel Floats are designed for use as permanent moorings. They may be constructed in any size and anchored in any harbor.

ARTISTIC STEEL FLOATS
WALSH BUGBEE CO., INC.
Engineers, Manufacturers and Builders Artistic Steel Floats and Docks

New York City
4 West 56th Street
Telephone: Circle 4653

Factory Office
206 East Hanover St., Trenton, N. J.
Telephone: Trenton 6257-8



Let Us Send You This Book!

The new Yachtsman's Guide is the only complete, up-to-the-minute yachting encyclopedia published. It contains 500 pages crowded with just the sort of practical information every motor-boat man wants. A copy of this invaluable volume should be aboard every boat and in the library of every yachtsman's home—on hand for immediate reference at all times. The following list gives you merely a partial glimpse of the wealth of material this book contains. Read it—think how it would help you!

- All about engines—installation, ignition, vaporization and operation.
- Hundreds of helpful hints on outfitting and overhauling.
- More than 100 Motor Boatmen's Charts for the entire Atlantic Coast, Great Lakes and Canada.
- Marine Laws—Rules of the Road at Sea.
- What to do if the motor stops unexpectedly.
- Times of high and low water and direction and velocity of tides in all ports.
- Latitude and Longitude Tables, giving locations of over 1,000 points.
- All kinds of marine codes, flags, etc.
- Details of hundreds of cruise routes, description of ports and channels, marine signals, codes, flags, etc.
- Characteristics of lights, buoys, fog signals, etc.
- Numbering Law—How to obtain numbers for your boat.
- What to do in a storm—to prevent collisions.
- How to organize a yacht club—Constitutions and By-Laws and many other helpful features.

Send for Your Copy Today

"The Yachtsman's Guide" sells regularly for $1.50. Twelve issues of MoToR BoatinG would cost you $5.00 at single-copy prices. But by taking advantage of our special offer at once, you can have "The Yachtsman's Guide" and a whole year of MoToR BoatinG, for $3.50.

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Are You Getting a GENUINE SEA-SKIFF?

KING SEA SKIFFS

Are Protected by Special Patented Features

BUILDING a craft of lap-strake construction does not make a sea-skiff. To construct a genuine sea-skiff, combining speed and absolute seaworthiness requires the work of a master builder. We are the originators of this type of boat, and hold patents covering its construction, which insure its speed and seaworthiness.

For the past 18 years KING sea-skiffs have made an enviable reputation all along the Jersey Coast where 80% of the fishermen are using them. Today they stand alone in real boat quality. The Customs Service in New York City has several KING sea-skiffs in service and four of these skiffs were built for the New Jersey State Wardens; all conclusive proof that the KING Sea-Skiff is truly King of the Sea.

CABIN MODELS

TWENTY-EIGHT FOOT SPORTSMAN
THIRTY-FOOT DELUXE CRUISER
THIRTY-SIX FOOT DELUXE CRUISER
Priced $1950 and up

OPEN MODELS

TWENTY-SIX, TWENTY-EIGHT and THIRTY FOOT SIZES

Priced from $1000 up including installation of motors

We are specializing this spring in
TWENTY-EIGHT FOOT SEDAN SKIFF

CUSTOM WORK

We are specialists in custom work and will be glad to submit plans and quotations.

Write Today for Further Information

Immediate Deliveries Available

KING BOAT WORKS
HIGHLANDS, NEW JERSEY

STANDARDIZED CRUISERS AND EXPRESS CRUISERS

PRICES—SIZES—EQUIPMENT

(Continued from page 288)

NAME OR NUMBER OF MODEL	Price	Length Feet	Beam Feet	Draft Feet	FREEBOARD		Head-room Feet	Bottom Round or Vee	Make of Engine	Horse Power	Speed m.p.h.	*STANDARD EQUIPMENT
					Forward Feet	Aft Feet						
WHEELER PLAYMATE **Brooklyn, N. Y.**												
De Luxe Junior Playmate..	3650	20-0	8-2	2-2	3-2	2-6	5-10	Semi-V	Chrysler	110	24	abcdefghpqsuvwyzBCFGLMSUVWXY
Standard Junior Playmate..	2875	20-0	8-2	2-2	3-2	2-6	5-10	Semi-V	Gray	72	14	abcdefghpqsuvwyzBCFGLMSUVWXY
Short Cabin Jr. Playmate..	2500	26-0	8-2	2-2	3-2	2-6	5-7	Semi-V	Chrysler	70	14	abcdefghqpsuvwyzBCFGJKLMSVWXY
Standard Playmate........	4500	29-0	9-3	2-4	3-5	2-8	6-1	Semi-V	Chrysler	110	20	abcdefghpqsuvwyzBCFGHJKLMQRSUVWXY
Short Cabin Playmate.....	4000	29-0	9-3	2-4	3-5	2-8	6-0	Semi-V	Chrysler	110	21	abcdefghpqsuvwyzBCFGHJKLMQRSUVWXY
Standard Super Playmate..	6850	33-0	9-6	2-6	3-8	2-10	6-2	Semi-V	Scripps	150	20	abcdefghpqsuvwyzBCEFGHIJKLMQRSUVWXYZ
Dble. Cab. Super Playmate.	6700	33-0	9-6	2-6	3-8	2-10	6-2	Semi-V	Chrysler	110	17	abcdefghpqsuvwyzBCEFGHIJKLMQRSUVWXYZ
Sp. Fisherman Su. Playmate	6850	33-0	9-6	2-6	3-8	2-10	6-2	Semi-V	Kermath	200	26	abcdefghpqsuvwyzBCEFGHIJKLMQRSUVWXYZ
Standard Playmate Cruiser	7950	36-0	10-0	2-8	4-0	3-0	6-3	Semi-V	Sterling	200	21	bacdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Dble. Cab. Playmate Cruiser	8850	36-0	10-0	2-8	4-0	3-0	6-3	Semi-V	Sterling	200	20	abcdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Com. Sedan Playmate Cr..	8750	36-0	10-0	2-8	4-0	3-0	6-3	Semi-V	Sterling	200	20	abcdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Single Cab. Playmate Sen.	9750	40-0	11-0	2-10	4-4	3-2	6-3¼	Semi-V	Sterling	200	18	abcdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Dble. Cabin Playmate Sen.	11250	40-0	11-0	2-10	4-4	3-2	6-3¼	Semi-V	Chrysler	2-110	22	abcdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Com. Sedan Playmate Senior	10500	40-0	11-0	2-10	4-4	3-2	6-3¼	Semi-V	Sterling	200	18	abcdefghpqsuvwyzABCDEFGHIJKLMQRSUVWXYZ
Dble. Cab. Master Playmate	19500	47-0	12-0	3-4	4-11	3-9	6-4	Vee	Sterling	2-200	24	abcdefghpqsuvwyzABCDEFGHIJKLMNQRSTUVWXYZ
Com. Sed. Master Playmate	19950	47-0	12-0	3-4	4-11	3-9	6-4	Vee	Sterling	2-200	24	abcdefghpqsuvwyzABCDEFGHIJKLMNQRSTUVWXYZ
WHITNEY **East Hartford, Conn.**												
35......................	8900	35-5	10-0	2-9	5-2	3-2	6-3	Vee	Sterling	200	20	abcdefhpqstuvwxyzBFGHIJKLMQRSUWXY
41......................	....	41-0	10-0	2-9	5-2	3-3	6-8	Vee	2-Chrysler	200	20	abcdefgpqstuvwxyzBCFGHIJKLMQRSUVWXY
WILEY **Oxford, Md.**												
41 Bridge Deck..........	10250	41-0	11-0	2-9	6-0	3-6	6-4	Vee	Optional	150	16	abcdefghpqsuvwxyzCEFGHIJKLMNQRSUVWXYZ
50 Cruiser...............	14000	50-0	13-0	3-0	6-2	3-9	6-4	Round	Optional	150	11	abcdefghpqsuvwxyzCEFGHIJKLMNQRSUVWXYZ
GAR WOOD **Detroit, Mich.**												
Express Cruiser..........	45.000 up	50-0	11-3	3-0	6-0	5-0	6-5	Vee	Gar Wood	425-525	42-47	abcdefhpqstuvwyzBCFGIKLMQSTUVWXYZ

*KEY TO EQUIPMENT SYMBOLS

a—Anchor
b—Anchor Lines
c—Dock Lines
d—Fenders
e—Cushions
f—Life Preservers
g—Mattresses
h—Springs
i—Bedding
j—Blankets
k—Table Linen
l—China
m—Glassware
n—Silverware
o—Galley Equipment
p—Stove
q—Ice Box
r—Radio
s—Bilge Pump
t—Bailers
u—Whistle
v—Fire Extinguisher
w—Running Lights
x—Searchlight
y—Electric Lights
z—Storage Battery
A—Clock
B—Tachometer
C—Motometer
D—Charts
E—Chart Case
F—Windshield
G—Awning or Top
H—Side Curtains
I—Compass
J—Fog Horn
K—Bell
L—Pilot Rules
M—Flags
N—Signal Code Flags
O—Sails
P—Oil Skins
Q—Boat Hook
R—Boarding Ladder
S—Tools
T—Dinghy
U—Table
V—Chairs
W—Floor Covering
X—Upholstery Inside
Y—Locker Space
Z—Chemical Extinguisher

PAINTS AND PAINTING BOATS

(Continued from page 140)

painted. Yacht white is very satisfactory and has the desirable quality that every time it is washed down, a little of it is rubbed off, keeping the surface clean and free from stains. It is easier to apply than enamel and will not require removing as often. Two coats of yacht white, or three, if the old finish was removed, is enough to last the season and look well throughout. Yacht white must be well brushed out and a week between coats for drying is none too long.

AMOUNT OF MATERIAL. In estimating the amount of paint or varnish required to refinish a boat assume that one gallon of paint or varnish properly applied will cover about 600 square feet of surface one coat. Paint remover must be liberally applied and one gallon will soften about 200 square feet of old paint. On varnish better results can be expected. If the boat is new or the old paint has been removed, practically double the amount shown in the table will be required.

	18 ft. Run-about	25 ft. Run-about	30 ft. Run-about	25 ft. Cruiser	30 ft. Cruiser	36 ft. Cruiser
Varnished Work	1 qt.	1 qt.	½ gal.	½ gal.	1 gal.	1 gal.
Decks & Floors	1 qt.	1 qt.	½ gal.	½ gal.	3 qts.	1 gal.
Topsides	1 qt.	1 qt.	½ gal.	½ gal.	3 qts.	1 gal.
Bottom	½ gal.	½ gal.	3 qts.	3 qts.	1 gal.	1½ gal.

In most cases there will be a little paint left over. If it is desired to save this for next season, put it in tight sealing cans or jars of a size that will be filled to the brim. A little paint or varnish left in the bottom of a can will not keep, but when the can is full, there is no air space to speak of and the paint keeps as in its original containers. Bronze bottom paint does not keep well after being mixed. W. B. M., Newburgh, N. Y.

PRACTICAL TANK INSTALLATION

(Continued from page 143)

the holes through the deck for the pipe line to the carbureter. A method which eliminates all danger is shown in the sketch. While this sketch shows only one tank, the construction details and laying out of the installation are practically the same.

The illustration shows the inlet pipe running well down into the tank, with a vent tube soldered into the inlet flange and carried to a point higher than the tank cap, then bent over; however, if the present tank inlet piping installation is preferred, solder a brass or copper cone inside the tank cap, as shown in sketch, to prevent fuel sloshing out.

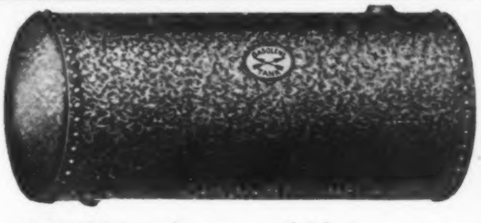
Ventilation should be provided for the inside of these lockers where tanks are installed. The sketch shows a round ventilating hole cut through the face of locker panel and covered with a copper gauze, which installation is not unsightly, ventilates well, and is protected by the copper gauze.

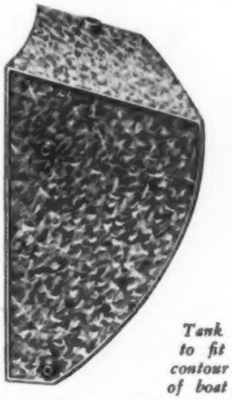
The pipe connections under deck, union, globe valve, strainer and check valve, are all made up with shellac and then soldered, excepting union, etc.

Last, but not least, don't let this drip pan get so full that it will run over into the bilge. If you are that forgetful, pipe this drip pan to the bilge pump.

Either of the foregoing systems, or one using the idea of drip pans, with the proper method of drainage, will be found to eliminate all troubles arising from fuel getting into the bilge. While it may cost a little money and some work on your part, it may be found to be very cheap insurance, as there is nothing more dangerous than fire or explosion hazards on the water. Each of us should take the proper precautions to prevent this danger from existing on our own craft.

V. L. S., Wilmington, Del.





KOVEN MARINE TANKS

for GASOLINE, AIR AND WATER

"The wind blows east,
The wind blows west,
But KOVEN Tanks,
Sure serve the best."

KOVEN tanks are available in numerous stock sizes . . . or can be made to fit *any* given space, to greatly increase storage capacity—and widen cruising radius.

Special Bow Tank

We Also Make to Order

Marking Buoys
Ventilating Stacks
Exhaust Manifolds
Rudders
(Galvanizing)

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L. O. KOVEN
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Tank to fit contour of boat

Philippine INDOAKO Wood

"Best for Boats"

Used in many Show Boats, for planking, decking or joiner work, including:

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Matthews Sport Cruisers
Richardson Cruisabouts
Whitney Woodcraft
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Old Town Craft

Be sure to visit our display of INDOAKO Wood at Booths 87 and 88, Third Floor, Grand Central Palace, where we offer you the special opportunity, free of charge, to consult Cliff S. Hadley, nationally known designer of speedboats, on any of your boat problems.

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DURKEE

At Booths 25-26-27

Better equipped than ever to handle your business

We carry the LARGEST Stock of Power, Sail Boat and Outboard Fittings for you to Select from

Our Motto is

Prompt SERVICE Dependable

Let Us Quote On Your Requirements

The Durkee Company, Inc.
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Write For Our Latest Catalogue

ONLY A ***LIMITED QUANTITY AVAILABLE THIS SEASON***

The RICKRUISER 30

A COMPLETE CRUISER

ROOMY cabin with six windows and four ports, equipped galley, toilet room, ample locker space, full headroom, four berths, oak frame, mahogany planking, fan ventilated Engine compartment for SAFETY, bronze screw fastenings, QUALITY construction throughout.

and yet only:	**$4550 powered with Gray 6/40**	
Prices at City Island, N. Y.	**$4700 powered with Gray 6/72**	**Speed from 10-19 m.p.h.**
	$4900 powered with Gray EIGHT	

Can be inspected at MINNEFORD YACHT YARD, CITY ISLAND, NEW YORK CITY

Or full particulars can be obtained from

RICKENBACK BOAT CORPORATION, 2 Broadway, Room 405, New York City

DEALERS WANTED

YARD AND SHOP

(*Continued from page* 498)

AUTOMATIC STEERING

The Director, manufactured by E. S. Ritchie & Sons of Brookline, Mass., is a new automatic steering device in which a magnetic compass controls the steering mechanism of a vessel. The compass is steady under all weather conditions and will steer a vessel better than a man will steer by hand.

The Director consists of a U. S. Navy Standard No. 1 Compass illuminated, supplied with a simple attachment whereby the changing indications of the compass control an electric circuit without detriment to the action of the compass. It thus controls a small electrical steering engine which is adapted to operate the steering wheel or mechanism of the vessel.

The power requirements are usually less than 100 watts. The steering engine can be instantly disconnected to allow hand steering. Also the hand wheel can be turned against the engine in an emergency. The rudder response to the compass can be instantly adjusted to fit all sea conditions ranging from a calm to a severe following sea.

The Director is simple, reliable and accurate. It relieves the helmsman of arduous labor at the wheel and leaves him free to keep an undistracted look-out ahead, an added factor of safety in fog or darkness. It saves time, distance and fuel, and frequently dispenses with a man. It can be installed on any motor boat or auxiliary sail boat.

BUCK WITH SPARKMAN-STEPHENS

Sparkman & Stephens, New York naval architects and yacht brokers, announce that Porter Buck has become associated with their organization. Mr. Buck, a member of the Cedarhurst Yacht Club, raced the Atlantic sloop Greta last year as well as the Victory class Madelon, which he owned.

MORE OIL BEING USED

A recent interview with Commodore H. Drakeley, manager of the Marine Department of the Enterprise Oil Company, manufacturers of Duplex Marine Engine Oil, Duplex Motor Oil and Kasson Waterproof Grease, disclosed the fact that over twice as much Duplex Marine Engine Oil was used in 1929 as in the previous year. The 1928 volume, moreover, was more than double that of 1927.

In commenting on this dramatic increase in the use of Duplex Marine Engine Oil by owners of all classes of boats from the smallest outboards to the largest cruisers, Commodore Drakeley said, "Now, as for years past, Commodore Gar Wood, the king of motor boat men, uses Duplex Marine Engine Oil exclusively and of course, used Duplex in defending the Harmsworth Trophy at Detroit last September. Commodore Wood is enthusiastic in his unqualified praise of the splendid manner in which Duplex Marine Engine Oil has aided him in maintaining his undisputed position as the world's greatest racing driver. It is interesting, also, to note that over 85 per cent of all fine standardized boats and marine engines built in America now carry plates bearing definite instructions to use Duplex Marine Engine Oil.

"We cannot help feeling that such facts conclusively bear out our original belief in developing Duplex Marine Engine Oils, that only a specially developed marine oil of the highest quality can give genuinely satisfactory marine service. We are proud of Duplex popularity with motor boat men whether they drive in races or for pleasure, and of the part we are playing in ever increasing the high standards of marine engine performance."

LAWLEY LAUNCHES ANOTHER

Poule D'Eau, 122-foot private yacht built for F. H. Goodyear of New York and Buffalo, was launched today from the shipyards of the George F. Lawley & Sons Corporation, Neponset, Mass. The boat was christened by Mrs. H. T. Lindsay of Boston.

In general design, the new craft resembles a naval torpedo boat, incorporating some of the widest departures ever attempted by a marine architect. From the high bow, the yacht recedes by a series of steps to extremely low stern.

On the waterline, she has a length of 119 feet. She has a beam of 19 feet, a draft of 6 feet and is powered by two 300-horsepower Bessemer Diesel engines operating on twin screws to develop a high speed of 15 knots and a cruising speed of 13 knots. She was designed by Henry J. Gielow, Inc., of New York.

Accommodations include two double staterooms immediately aft of amidships on the cabin deck and two single staterooms with baths. The dining saloon is on the main deck aft of the captain's quarters and the pilot house; the living room is on the same deck forward.

Quarters for a crew of 12 are forward on the lower deck. Auxiliary equipment includes a metal mike, a gyroscopic compass, a thermofan system for heating, cooling and ventilating, and a Sperry electric steering gear. Two small boats, a 20-foot launch and an 18-foot crew's boat, are carried.